

Solar Cooking System for 2400 students using Scheffler Dishes at Bashyam Public School, Guntur, A.P.

Location: Goruntla , Guntur

Type of Installation: Scheffler Dishes

Configuration: 224 m² (16 m² x 14 Nos.)

Supplier: Airier Natura Pvt. Ltd.

Application: Cooking

Year of Installation: 2013

Beneficiary Details: Bhashyam with its innovative and success oriented ideas has captured the imagination of the students and is today a household name, when it comes to quality education. It has always believed that academic excellence along with comprehensive development of the child is the key to succeed in this competitive world. With its unique and novel curriculum offered to the students from class VI to X, Bhashyam has become a preferred destination for the aspiring parents who are committed to give the best to their children right from initial stages of learning.



Bashyam School at Guntur

System Details: Bashyam Public School has implemented the parabolic based system for the purpose of cooking. The total system has 14 numbers of Scheffler Dishes having area of 16 m² each. The system was commissioned in 2013 by M/s. Airier Natura Pvt. Ltd. The system is integrated with the existing process of fuel wood to boiler and LPG. The project is set up at a cost of Rs. 39.60 Lakh and MNRE subsidy of around Rs. 12 Lakh.



CST dishes on rooftop at Bhashyam School



Cooking System at BPS

Timings & System Application Details: The system is used for cooking 2400 meals per day. It is used for preparation of breakfast, lunch and dinner. The School has benefitted by saving around 1000 Kg of fire wood and 1.5 Kg LPG Cylinders per day.

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| Steam Generation: 800 kg/d Operating Temperature & Pressure: 100-120°C; 6-8 kg/cm ² | |
| Type of Fuel: Wood +LPG Fuel Saved: 1000 kg & 1.5 cylinders of LPG day | |
| Functionality & Key Issues of Non-Operation: Operational | |
| Status of Equipment: Installation is good. Mirrors are replaced due to heavy winds. | |
| O & M Issues & Beneficiary Perception: Initially few problems had been encountered while setting of dishes and collectors. After training the issue has got streamlined. | |
| Financials in Detail: The project is set up at a cost of Rs. 39.60 Lakh with a MNRE grant of the order of Rs. 12 Lakh. The plant saves around Rs. 13.50 Lakh per year for purchase of firewood and LPG of Rs.7.50 Lakh per year. The plant has an operating IRR of 52.60 % and payback period of 1 year and 5 months with subsidy as compared to an IRR of 41.83 % and a payback period of 2Years 3 Months without subsidy. Total saving per year is Rs.19.30 Lakh with net savings of Rs.18.84 Lakh against O&M and other charges. | |
| Cost of System : Rs. 39.60 Lakh | MNRE Subsidy: Rs. 12 Lakh |
| IRR & Payback with Subsidy: 52.60 % & 1 Year and 5 Months. | IRR & Payback without Subsidy: 41.83 % & 2 Year and 3 Months. |
| Overall System Performance: Very Good | Date of Visit: 17-05-2013 |
| Beneficiary Contact: B Srinivas Bhasyam Public School Gorantla Hyderabad Cell: 09848536935 |  |
| Fuel wood Boiler System at BPS | |