

# Steam Cooking System for 1200 Students using Scheffler Dishes at IIMB, Bangalore, Karnataka

**Location:** IIM Bangalore

**Type of Installation:** Scheffler Dishes

**Configuration:** 96 m<sup>2</sup> (16 m<sup>2</sup> x 6 Nos.)

**Supplier:** Unisun Technologies, Bangalore

**Application:** Cooking

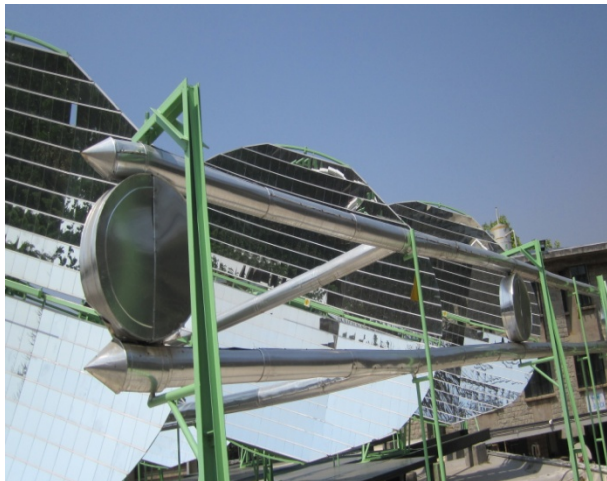
**Year of Installation:** 2011

**Beneficiary Details:** The Indian Institute of Management, established in 1973 is one of the premier institutes for management education and research promoting managerial excellence in the country. The institute is located at Bannerghatta Road, Bilekahalli, Bangalore, Karnataka. IIMB has implemented 96 Sq m<sup>2</sup> capacity Concentrated Solar Project for the purpose of cooking. The plant is installed on the roof top of the mess at the Campus. The system serves the requirement for cooking food of around 1200 students.



**Indian Institute of Management, Bangalore**

**System Details:** The system was commissioned during January 2011 by M/s. Unisun Technologies (Pvt.) Ltd, Bangalore and comprises of installation of 6 concentrators of 16 m<sup>2</sup> capacity each. Prior to the implementation of the solar cooking system, the establishment was using LPG cylinders for cooking in the hostel mess. The system is integrated with the existing process. The project is set up at a cost of Rs.15.56 Lakh which includes MNRE Subsidy of Rs. 3.90 Lakh.



**Array of Scheffler Dishes at IIMB**



**CST based Cooking System at IIMB**

**Timings & System Application Details:** The system is operated for preparation of breakfast, lunch and dinner. It is used for approximately 5 hours per day and around 240 days in a year. It is integrated with the existing LPG system for cooking around 35 kg of Rice, 10 kg of Dal, 10 kg of vegetables and boiling of 50 liter of milk twice a day. It is operating properly and has resulted in saving of purchase of 240 LPG Cylinders/year.

**Steam Generation:** 390 kg/d      **Operating Temperature & Pressure:** 100-120°C; 6- 8 kg/cm<sup>2</sup>

**Type of Fuel Saved:** LPG      **Quantity of Fuel Saved:** 240 Cylinders/year

**Functionality & Key Issues of Non-Operation:** Operational

**Status of Equipment:** The system is operating properly and is benefiting by saving around 1 LPG Cylinder /day. The system is used during June to March and is not operated during April to May on account of vacation of the students. The system's performance is good. However, the staff requires tuning for seasonal adjustments and is attended by the supplier.

**O & M Issues & Beneficiary Perception:** The beneficiary is satisfied with the operation of the system and occasionally few mirrors in the dishes are damaged.

**Financials in Detail:** The project is set up at a cost of Rs. 15.56 Lakh with a grant from MNRE of the order of Rs. 3.90 Lakh. The plant saves around Rs. 43,200 per year on an annual cost of purchasing LPG. The plant has a project IRR of 24.66 % and payback period of 3 Years and 4 Months without subsidy, while the IRR with subsidy is increased at 31.84 % and payback period decreasing to 2 Years and 5 Months.

**Cost of System:** Rs. 15.56 Lakh

**MNRE Subsidy:** Rs. 3.90 Lakh

**IRR & Payback with Subsidy:**  
31.84% & 2 Years and 5 Months

**IRR & Payback without Subsidy:**  
24.66 % & 3 Years and 4 Months

**Overall System Performance:** Very Good

**Date of Visit:** 15-04-2013

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