

Excellence in Energy Management...

CASE STUDIES

A case study of a Hotels

Introduction:

This case study of a 5 Star Deluxe Hotel, part of India's leading Group of Hotels is located in Kolkata, India. It was important that they run various services viz., air-conditioning equipments, lighting etc., at all times so as to not create any inconvenience to their guests. Hence it was important to realize the energy consumption patterns at various points of time in the hotel vis-à-vis the occupation state. This would result in their being better informed about potential energy saving areas which would lead to lower energy expenditure.

The System: In the first phase the entire kitchen, laundry and lighting loads were brought under monitoring, as this was the most likely area of savings, also they would be able to exercise some control. These meters were connected to a central computer dedicated for monitoring purpose alone. Various features of the system such as trends, real time energy value displays and energy consumption reports at various time frames were provided.

Conzerv's eLAN[®] - Energy Management Systems comprises of a PC, data convertor, data logger and 12 nos. of Energy meters (DM 5240) hooked up in a RS 485 backbone network. The Energy Meters monitor the energy consumption at the following location.

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|-------------------------|------------------------|
| 1. Main Kitchen | 2. Chinese Kitchen |
| 3. Sonargaon Kitchen | 4. Coffee Shop Kitchen |
| 5. Room Service Kitchen | 6. Chamber Kitchen |
| 7. Guest Room – I | 8. Guest Room – II |
| 9. Banquets AHU | 10. Laundry |
| 11. Lobby Lighting | 12. Bakery |

Results and Observations: The system provided them with valuable insights into the energy consumption patterns at individual loads. This previously was done manually which was less informative and also inaccurate. Another feature they were able to obtain was the plotting of sanctioned energy consumption vs. actual energy consumption where each load center was budgeted for a certain number of units and after the stipulated time the variances were arrived at. This allows them now to probe into the energy wastage that occur at various load centers and take suitable actions. The Hotel now plans to expand their energy monitoring by bringing in more load centers in the next phase for which they plan to use our sophisticated Multifunction Meters.

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