



Case Study - Jury's Doyle Burlington Hotel - Dublin



Project Details:

Electrical Output	185kWe (30%)
Heat Output	310kW (50%)
Fuel Input	580kW
Heating Water Temp	80 oC
Operational Hours	15hrs per day
Availability	96%
Contract Type	Capital Purchase
Payback Period	2.3 years
Savings	73,269 Euro pa
Installation Date:	May 1991
Prepared by:	ESB

Project Summary:

At the Jury's Doyle Hotel Group one of the main objectives is to offer a high standard of service whilst offering customers value for money. The group achieve this by running the hotels efficiently, and keeping costs to a minimum. One of the largest controllable costs for any company is energy expenditure, and with this in mind the hotel group decided to implement Combined Heat and Power (CHP) Technology in conjunction with an Energy Management System (EMS) into the Jury's Doyle Burlington Hotel situated in Leeson Street, near central Dublin.

The use of Combined Heat and Power would allow the hotel group to produce electricity onsite at a lower cost and benefit from the heat produced as a by product of the generation process.

The Jury's Doyle Burlington Hotel is Ireland's largest hotel with over 500 bedrooms, excellent conference facilities with an exceptionally high degree of comfort décor and service. A hotel of this size is perfect for the application of Combined Heat and Power technology as it has a high electrical and heat requirement.

The hotel group selected Limerick based Temp Technology Ltd to provide install and maintain the CHP system. Temp Technology have been operating in the CHP market for many years and with over 70 installations to date they are one of Ireland's leading CHP suppliers with a high level of operational experience.

Maximum Demand Reduction:

The CHP installed by Temp Technology at the Burlington Hotel avails of ESB's maximum demand tariff. By reducing its peak demand at specific periods i.e. spreading its electricity usage more evenly, it can achieve substantial savings on its electricity bill. CHP helps considerably in this regard as it provides 185kW electricity, which would otherwise be supplied by ESB.

Additionally, because of the high availability of the CHP unit, the reduced demand due to the tighter control by the Energy Management System and the judicious switching out of non-essential loads by the EMS, maximum demand reductions of 260kW (min)-495kW(max) have been achieved.

Maintenance:

Temp Technology carries out all maintenance of the CHP. The unit is equipped with an on board computer which allows continuous monitoring of the unit via modem. This expert systems allows Temp Technology to produce monthly performance reports and to identify any problems with the unit before a breakdown occurs.

Temp Technology also carries out routine maintenance every 800 hours - a service that includes the replacements of oil and filters, oil quality, sparkplugs, and an engine performance analysis.

As a result of their CHP installation, the Jury's Doyle Hotel Group are now receiving net savings in excess of 73,000 Euro per annum at the Jury's Doyle Burlington Hotel whilst making a positive contribution to the environment. The CHP system also reduces the amount of energy consumed and the harmful Carbon Dioxide gas produced.

Prepared by ESB

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