

HVAC system upgrading for better energy efficiency and heat recovery use at Beit Shean Youth Hostel – Israel

SUMMARY

Project Description: The main purpose of the installation of this system is to increase the energy efficiency of the water heating system and the air condition system in the hostel

Project Type: Energy Efficiency

National Association: Israel Youth Hostel Association

Project Location: Beit Shean, Israel

Estimation of number of reduced tonnes of CO2:
The proposed installations should save 400 tonnes of CO2e emissions per year

Total Funds Requested: £ 7,000

Total Project Cost: £ 58,000

Annual £ saves and ROI (return of investment): We anticipate a ROI of 3 years with savings of £16,500 and 27,000 litres of fuel per year

Why should this project be funded ahead of others?

IYHA is a pioneers in tourism in Israel, to get a Green Label for our service. Every year IYHA invests large amounts in sustainability projects in our hostels and headquarters.

By saving energy costs the hostel can re-allocate its sources and use this money to improve its service and to invest in other sustainability projects.

IYHA recognizes de importance of energy efficiency and that's the reason we founded the project and we will keep investing in similar projects.

Methodology (How)

Old and un-efficient air cooled chiller were replaced by new chillers with full heat recovery. Chillers are rated Eurovent A, with new refrigerants (R134A). Heat reclaimed used to heat sanitary water all year round and space heating during winter.

Monitoring plan

The system is computerized and can monitor and control its activity.

Environmental impacts

The main environmental impact of the system is significantly lowering CO2 emissions to the atmosphere. The current system we use works on fuel, the transfer to the chillers system and the connection to the water heating system will allow us to burn fuel only on rare situations. The system uses the heat ejected while producing cold water for the air conditioning system to heat the water, this will improve the energy utilization of the system and therefore reduce 400 tonnes of CO2 emissions per year.

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