

YHA Israel: Water Heating System - Mitzpe Ramon



Purpose/objectives of the project activity

Today the water heating system in the hostel use diesel. The new system will have 2 electrical heat pumps. The main purpose of the new system is to increase the energy efficiency of the water heating system in the hostel: to achieve a significant reduction in CO2 emission and to save energy.

Contribution to the Sustainable development goals

By changing the heating system to a new one based on heat pumps instead of diesel, we hope to achieve a complete stop of the CO2 emission and to increase the energy efficiency of the hostel.

Methodology

The current water heating system uses diesel and the process involves gas emission, especially CO2. The new system has two electrical heat pumps with cool air condensers. Using the new system, especially in the desert area that the hostel is located, will heat the water using electricity and will not emit CO2.

Monitoring plan

The pumps have a very advanced computerized monitoring system. This system has an application that will alert in case of faults. The application will be downloaded to the cell phones of main relevant workers in the hostel (maintenance, manger etc.).

Contribution to the ten areas

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The Israeli association is doing a lot in sustainability matters: Changing old systems into new and efficient systems; trying to produce less pollution and less CO2 emissions; we are doing efforts to involve all our hostels in these processes and to contribute as much as we can to protect nature and the environment

Environmental, economic and social impacts

Since it is an electrical closed system, there is a complete stop of gas emission see below for expected economic impacts

Estimation of emission reductions

Today the hostel uses about 42,000-liter of diesel per year. With the new system, we will no longer use diesel. This will reduce CO2 emission by approximately 130 tons per year.

Estimated Return of Investment

The cost of diesel (using for the present system) is about 64,000 GBP per year. Two heating pumps with output of 45KWH will reduce the time we need in order to heat the water. The estimated cost we will need to pay with the new system is less than 7,000 GBP per year. We are about to save 56,000 GBP per year and to return the investment in less than 2 years (ROI 1.44). IYHA invest a lot in changing old systems to new and efficient, and the money we will save from the system will be invested in other sustainable project in one of our hostels

Why this project be funded ahead of others

The Israeli association is very active in sustainable subjects. We invest large amounts of money in sustainable projects in order to improve and optimize all our systems and be energy efficient as much as we can. The hostel in Mitzpe Ramon is a unique hostel seats on the edge of Ramon Crater, in the desert, gives services to local and foreign tourists visit the area. We think it has a great importance to improve the systems in the hostel and to invest in sustainability. By saving energy costs, the hostel can reallocate its resources to improve the services, to develop educational programs etc.

Communication plan

We advertise our sustainable actions, as well as HI's actions, in the hostels (bulletin board) and in our newsletter. Besides, we share the HISF details with our guests and potential guests through our website, Facebook etc. We will add this subject to the news.

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