Is solar water heating profitable for homes essay examples

Environment, Electricity

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When investing on the solar heater system, the solar collectors are installed to capture the solar heat that is transferred to heat water in the most of the buildings. Different technologies are applied depending on the sun or the size.

The solar water heaters are composed of storage tanks, collectors and electric pumps depending on the system.

Types of collectors;

- Flat-plate
- Evacuated-tube
- Concentrating

There are different types of solar water heaters grouped either as passive or active. For the heat-transfer fluid to circulate in an active system, an electric pump is used while in passive system, no pump is used.

Factors that determine the amount of hot water

- Size and type of the system
- Available amount of sun
- Proper installation
- Orientation and tilted angle of the collector

The use of solar water heater drops the water heating bill to 80% since the sun is free compared to electricity which is expensive.

Most of the apartments use sources of energy like natural gas, electricity or oil to heat up the tenants' hot water. This is costly as their prices increases every year reducing the profit of the most tenants since most of them can

afford to meet the rent plus the electricity bill. Therefore most reliable source is solar which is freely available without price fluctuation. Therefore the tenant operators have to move to solar water heater in order to boost profits and reduce the expenses.

There are various solar water heater technologies used in homes. These technologies has collector that either concentrates the heat in an air handling or pipes then supplies the hot water or air through the building. When dealing with industrial heating or larger commercial applications more complex technologies like Evacuated Tube Collectors or Parabolic Trough collectors are used (Solar Water Heating Systems, 2013).

The flat plat collector is mounted on the buildings. This technology is mostly used in homes where there is no high temperature required. The evacuated tube collectors are mounted only on-roof. This is due to their lightweight of the materials made of. There best installed in the apartments due to the fact that it provides more heat to be supplied. Also the evacuated tube collector requires less area for installation but gives more output. They are mostly used in areas where high temperatures and low radiations is required like in apartment since there are more tenants to be supplied with heated water.

Once the installation on the solar water heaters has been completed, the profit or payback can be expected after four to eight years depending on the design and how they were installed. High profit is revealed in areas with the highest costs of energy. Once the payback of four to eight years has been revealed, then profit can be saved in a range of fifteen to forth years. This duration depends on the maintenance and the system installed (states advancing solar, 2013).

Weather has great impact to the amount of heat that is to be supplied by the solar water heater. Where there is high temperature, there is a high amount of heat that is invested from the area. Also the size of the area where the collectors are installed determines the amount of sun to be harvested. The higher the surface is the more amount of heat harvested to heat the water. Finally, after analysing various technologies used to collect sun that is used to heat water in homes/apartments, it is advisable to people to shift from electrical heating to solar heating. This is due to high electric bills incurred when heating water compared to solar. Solar heating is cheap as its main source which is the sun is freely available and no bills incurred once installed. By investing in solar water heating there is high profit realized and low rent to tenants. Therefore people should be encouraged to invest in solar water heating technology.

Work cited

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