

عنوان مقاله:

Assessment of Greenhouse Heating/Cooling via Heat Pump for Herat-Afghanistan

محل انتشار:

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خلاصه مقاله:

Energy is an essential need for living, and renewable energy sources are increasingly popular sustainable energy sources. Solar energy is an inexhaustible and clean, sustainable energy source in the world. In this study, heating of a greenhouse in Herat (Afghanistan) with a heat pump using solar energy was investigated. The greenhouse was kept at 20 °C, and the electricity required to operate the heat pump was taken from the grid. As a result of the analysis, the exergy/electricity input reaches 25.59 kWh, while the minimum values are equal to 0.01 kWh. It was determined that the product exergy went maximum product exergy of 6.38 kWh. Finally, it was determined that a ground source heat pump with a higher COP could be used instead of an air source heat pump.

کلمات کلیدی:

Greenhouse, solar energy, Heat Pump, Herat-Afghanistan

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