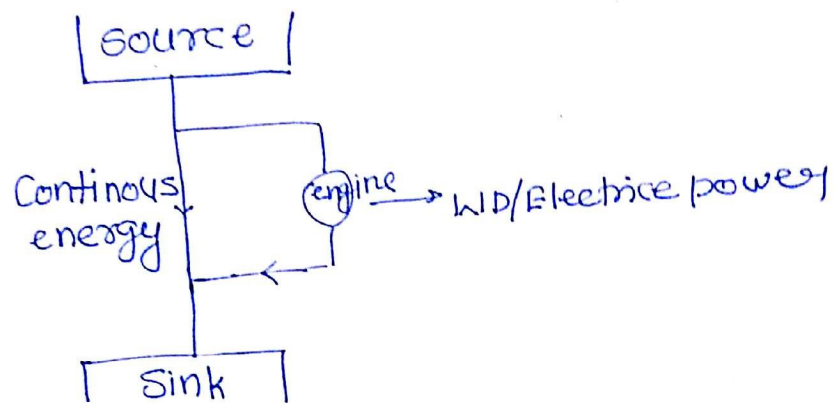


* Renewable Sources of Energy *

Objective:- Renewable energy is the form of energy which flows naturally and repeatedly.

Benefits:-

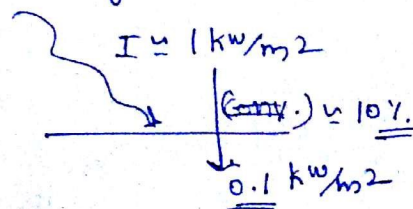
Renewable energy diagram



- ① Availability:- over wide Geographical area.
- ② Replacible:- Continuously over a large time period
- ③ Eco Friendly/clean energy! - Pollution free.
- ④ Running Cost will be minimum:-

Disadvantages:-

- ① Dilute form of energy
- ② extraction of energy requires more land area

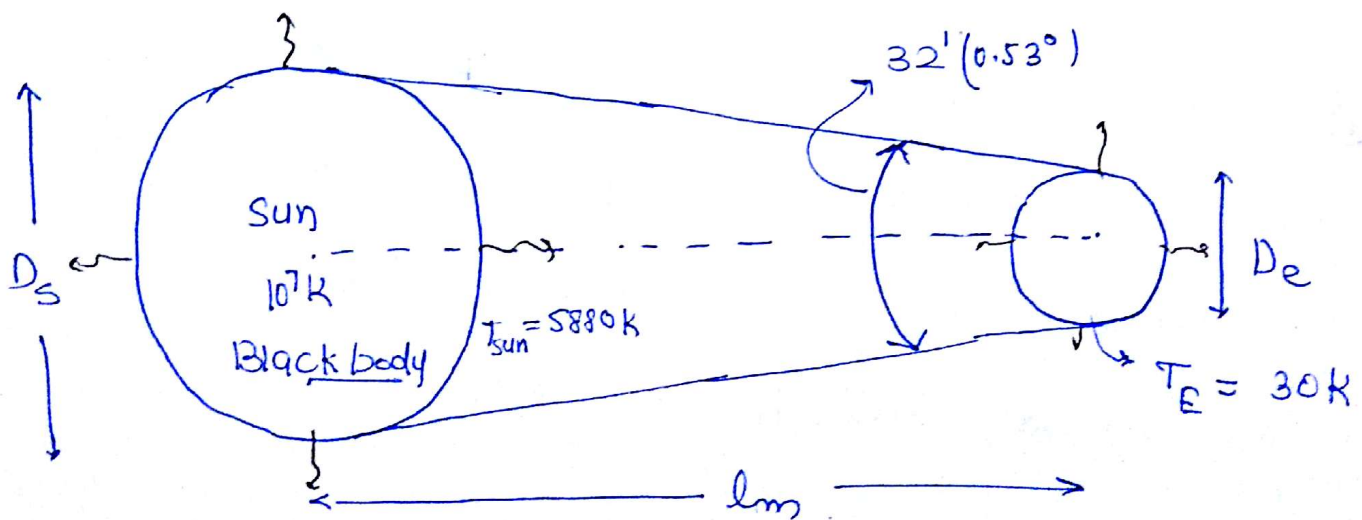


- ③ Highly Fluctuated. $\rightarrow$ depend on location and weather condition.
- ④ Initial investment will be high.

Mode of heat transfer

Physical Contact req $\left\{ \begin{array}{l} q_{\text{rad}} \propto (T_1 - T_2) \\ q_{\text{conv.}} \propto (T_1 - T_2) \end{array} \right.$

E.M.W $\left\{ \begin{array}{l} q_{\text{Rad}} \propto (T_1^4 - T_2^4) = (T_1 - T_2)(T_1 + T_2)(T_1^2 + T_2^2) \end{array} \right.$



$$D_s \approx 10^6 \text{ km} \quad L_m \approx 10^8 \text{ km}$$

$$D_e \approx 10^4 \text{ km}$$