

What is THERMAL energy and its role in the society .

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PREFACE: THIS IS BLOG WRITTEN ON THERMAL ENERGY THIS BLOG WILL CONTAIN SOME SCIENTIFIC AND STATISTICAL INFORMATION ON THERMAL ENERGY . THIS MODULE IS GENRATED USING ONE NOTE SOFTWARE BY ACHINTYA "

Introduction to Thermal energy :

Thermal energy refers to several distinct physical concepts but for our understanding we can understand thermal energy as the energy generated by the atoms or molecules or simply the particles of an object in motion . For instance if we heat a block of iron it becomes as hot , but why ? The answer for this is that particles constituting the block gradually increase their Kinetic energy as result of heating and due to that motion some energy is generated and that energy generated is in the form of heat energy .

Commercial use of thermal energy

The use of Thermal energy is quite immemorial for the human race as the early humans first discovered fire which they used for their survival , over the time as civilization evolved the uses of thermal energy also increase and evolved in the recent past thermal was used as fuels for steam engines but nowadays thermal energy is mostly used for electricity generation. In India thermal energy used as percentage of total energy used is about 61.50% and this thermal energy is obtained from various sources like coal , diesel , lignite , gas etc. sources . In India most of the energy requirements are fulfilled by the thermal energy which makes it more important for us Indians to conserve our thermal energy sources as due to its overuse. As aforementioned in the module about heat energy being used to develop the most paramount form of energy used in our day to day life that is "Electricity" some of you may be surprised but yes by a very immaculate and svelte physical phenomenon we can do it and that is the SEEBECK EFFECT . The Seebeck effect is quite unambiguously described in the mathematical and physical language but understanding it is currently out of the scope of this blog but quite straightforward it explains that because of a created tempreture difference(i.e. Thermal gradient) there is electrical voltage generated . And this effect is used in the industries to save and reuse the heat energy generated during the industrial process and this is used phenomenon used to make THERMOELECTRIC GENERATORS . This TEG technology is used in military and aerospace industry curently North america is the leading share holder in the TEG technology market .