

# Temperature difference power

## The temperature difference power generation

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The temperature difference power generation, it is a way to generate electricity using the temperature difference between the low temperature and high temperature. The greater the temperature difference, the greater the amount of power generation will increase.

At present, there are two types of power generation and how to rotate the mechanical turbine at a temperature difference, of how to power by giving the temperature difference in the semiconductor. Here, I will explain how to give a temperature difference in the semiconductor.

## Mechanism of Thermal Energy

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The symptoms of a electric direct current (which is a semiconductor conduct electricity and "conductor", has the property of the intermediate does not conduct electricity in "insulator") semiconductors two different types, to give a temperature difference to use. I called the "Seebeck effect" this phenomenon. Constraints Installation Place is saved by ③ miniaturization miniaturization is likely to be so used ② semiconductor it is hard to fault generation volumes are low in this power generation method, but (moving parts) moving parts ① machine is small There are advantages such as less.

## Efforts of Thermal Energy

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There is also a generation method using a temperature difference not only utilizes the temperature difference in the nature was artificially created. The temperature difference in the nature, I will use a heat source, such as ice and hot springs (source), solar and snow. In addition to the temperature difference that produced artificially, I will use a heat source, such as heat from the engine of the waste heat from the automobile and cleaning plant and steel mill. Experiments have been made, such as public baths and hot springs at present.

## Future of Thermal Energy

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Heat source will be lost without being used in the world, such as vehicle, that power underground regional hot springs springs, industrial and factory area, the engine is there are many. Now, a computer that plays a fundamental role in our lives. Computer 24 hours and powered There are many all over the world, I have a better our lives. Thus, the heat, such as is familiar in our also are able to utilize the thermal energy.

By developing a system of small thermal energy is available, you can easily be taken out power from the heat source that was wasted. In addition, throughout the world, carbon dioxide emissions has become a problem. If you are able to make effective use of this temperature difference power generation, what not lead to resolution of environmental issues.

## The merit demerit of thermal energy conversion

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The merit and demerit about ocean thermal energy conversion are explained also in thermal energy conversion especially here.

Ocean thermal energy conversion (OTEC) is a kind of thermal energy conversion generated using the difference in temperature of surface warm sea water and the cold sea water of the depths.

### **The merit of ocean thermal energy conversion**

- It is an energy source about clean and renewable sea water.
- The country which can build can generate 1 trillion kW by 98 nations.
- There is little emission of carbon dioxide compared with other power generation methods.

### **The demerit of ocean thermal energy conversion**

- There is a possibility that a marine ecosystem may get damaged.
- When large-scale, there is a possibility of interfering with an ocean current.

## **Other**

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