

## **1. Read the text**

### **Source of power**

The industrial progress of mankind is based on power: power for industrial plants, machines, heating and lighting systems, transport, communication. In fact, one can hardly find a sphere where power is not required.

At present most of the power required is obtained mainly from two sources. One is from the burning of fossil fuels, i.e. coal, natural gas and oil. The second way of producing electricity is by means of generators that get their power from steam or water turbines. Electricity so produced then flows through transmission lines to houses, industrial plants, enterprises, etc.

It should be noted, however, that the generation of electricity by these conventional processes is highly uneconomic. Actually, only about 40 per cent of heat in the fuel is converted into electricity. Besides, the world resources of fossil fuels are not ever-lasting. On the other hand, the power produced by hydroelectric plants, even if increased many times, will be able to provide for only a small fraction of the power required in the near future. Therefore much effort and thought is being given to other means of generating electricity.

One is the energy of hot waters. Not long ago we began utilizing water for heating and hot water supply, and in some cases, for the generation of electricity.

Another promising field for the production of electric power is the use of ocean tides. Our engineers are engaged in designing tidal power stations of various capacities. The first station utilizing this principle began operating in the Soviet Union on the Barents Sea in 1968.

The energy of the sun which is being used in various ways represents a practically unlimited source.

Using atomic fuel for the production of electricity is highly promising. It is a well-known fact, that one pound of uranium contains as much energy as three million pounds of coal, so cheap power can be provided wherever it is required. However, the efficiency reached in generating power from atomic fuel is not high, namely 40 per cent. No wonder, therefore, that scientists all over the world are doing best to find more efficient ways of generating electricity directly from the fuel.

### **Task 1. Answer the questions:**

1. What is the industrial progress of mankind based on?
2. Which is the first widely applied method of producing electricity at present?
3. Which is the second way of generating power?
4. What (how high) is the efficiency of these two methods?
5. What do we use the energy of hot water for?

6. When and where did the first power station using ocean tides begin operating in Russia?

**Task 2. Match the word with their English equivalents.**

1.Эффективность	a) power station
2. Атомное топливо	b) electricity
3. Действовать	c ) source of heat
4.Источник тепла	d ) the efficiency
5.Электростанция	e) to operate
6.Электричество	f) atomic fuel
7.Уголь	g) coal

**Task 3. Are these statements true or false?**

1. Scientist all over the world are doing best to find more efficient ways of generating electricity directly from the air.
2. Another promising field for the production of electric power is the use of ocean tides.
- 3.The world resources of fossil fuels are ever-lasting.
4. At present most of the power required is obtained mainly from three sources.
5. In fact, one can hardly find a sphere where power is not required.
6. It should be noted, however, that the generation of electricity by these conventional processes is highly economic.
7. The energy of the sun which is being used in various ways represents a practically limited source.