TEXT 1

●Прочитайте и переведите текст.

ELECTRICITY

It is impossible to imagine our civilization without electricity: economic and social progress will be turned to the past and our daily lives completely transformed. Electrical power has become universal. Thousands of applications of electricity such as lighting, electrochemistry and electrometallurgy are longstanding and unquestionable. With the appearance of the electrical motor, power cables replaced transmission shafts, gear wheels, belts and pulleys1 in the 19-th century workshops. And in the home a whole range of various time and labour saving appliances2 have become a part of our everyday lives. Other devices are based on specific properties of electricity: electrostatics in the case of photocopying machine and electromagnetism in the case of radar and television. These applications have made electricity most widely used. The first industrial application was in the silver workshops in Paris. The generator – a new compact source of electricity – was also developed there. The generator replaced the batteries and other devices that had been used before. Electric lighting came into wide use at the end of the last century with the development of the electric lamp by Thomas Edison. Then the transformer was invented, the first electric lines and networks were set up, dynamos and induction motors3 were designed. Since the beginning of the 20-th century the successful development of electricity has begun throughout the industrial world. The consumption of electricity has doubled every ten years. Today consumption of electricity per capita4 is an indicator of the state of development and economic health of a nation. Electricity has replaced other sources of energy as it has been realized that it offers improved service and reduced cost. One of the greatest advantages of electricity is that it is clean, easilyregulated and generates no by-products5 . Applications of electricity now cover all fields of human activity from house washing machines to the latest laser devices. Electricity is the efficient source of some of the most recent technolo- 5 gical advances such as the laser and electron beams. Truly6 electricity provides mankind with the energy of the future.

Notes to the Text

1. transmission shafts, gear wheels, belts and pulleys – трансмиссионные валы, зубчатые колеса, ремни и блоки.

2. time and labour saving appliances – электроприборы, экономящие время и труд.

3. induction motors – индукционные моторы.

4. per capita – на человека; на душу населения.

5. by-products – побочные продукты.

6. truly – поистине.

Vocabulary

advantage – преимущество

appearance – появление

application – применение, заявление

completely – полностью, целиком

consumption – потребление, расход

to cover – охватить, охватывать

to design – конструировать, проектировать

device – прибор, устройство

to double – удваивать

efficient – эффективный

to generate – вырабатывать, производить

to imagine – представлять себе, воображать

to invent – изобретать

power – энергия, мощность

property – свойство

recent – недавний, последний

to reduce – уменьшать, снижать

to replace – заменять

set up (set) – воздвигать, сооружать

source – источник

state – положение, состояние

such as – такой как

to transform – преобразовывать

to turn – поворачиваться, обратиться; превратить (into)

wide – широкий

without – без

whole – весь, целый

in the case of – в случае

to be based on – основываться, быть основанным на…

**Упражнения ●**

**Упражнение** 1. Определите, к какой части речи относятся производные слова, и переведите их:

invent – inventor, inventive, invention;

transform – transformer, transformation;

generate – generator, generation, generative;

pollute – polluter, pollutant, pollution;

6 effect – effective, effectively;

vary – variety, various;

possible – impossible, possibly, possibility;

complete – completely;

recent – recently;

replace – replacement;

economic – economical, economically. ●