

Text A Energy today Unit 5 Energy today

Prosperity for everyone on Earth by 2050 will require a sustainable source of electricity equivalent to 3 to 5 times the commercial power currently produced. Because of the low average incomes in developing countries, however, this energy must be provided at one-tenth the present total cost per kilowatt-hour. Solar-power stations constructed on the moon from common lunar materials could provide the clean, safe, low-cost commercial electric energy needed on Earth.

Currently, commercial energy production on Earth raises concerns about pollution, safety, reliability of supply, and cost. These concerns grow as the world's nations begin to expand existing systems to power a more prosperous world. Such growth could exhaust coal, oil, and natural gas reserves in less than a century, while the production and burning of these fossil fuels pollute the biosphere. Expanding nuclear fission power would require breeder reactors, but there is intense political resistance to that idea because of concerns about proliferation, nuclear contamination of the environment, and cost. Thousands of large commercial fusion reactors are highly unlikely to be built by 2050. Terrestrial renewable systems (hydroelectric, geothermal, ocean thermal, waves, and tides) cannot dependably provide adequate power. Using wind power would require capturing one-third of the power of the low-level winds over all the continents.

Although energy coming directly to Earth from the sun is renewable, weather makes the supply variable. Very advanced technologies, such as 30 % efficient solar cells coupled with superconducting power transmission and storage, imply solar arrays that would occupy selected regions totaling 20 % of the area of the United States. Studies funded by the World Energy Council project that terrestrial solar energy will provide less than 15 % of the electric power needed for global prosperity by 2050.

EXERCISE 1

Выпишите незнакомые слова и составьте словарь, аналогичный предлагаемому в предыдущих уроках.

EXERCISE 2

Переведите текст и составьте по одному вопросу к каждому абзацу.

EXERCISE 3

Дайте названия абзацам.

EXERCISE 4

Выделите главную идею каждого абзаца и прочтите предложение, которое является главным для каждого абзаца.

EXERCISE 5

Перескажите текст.