

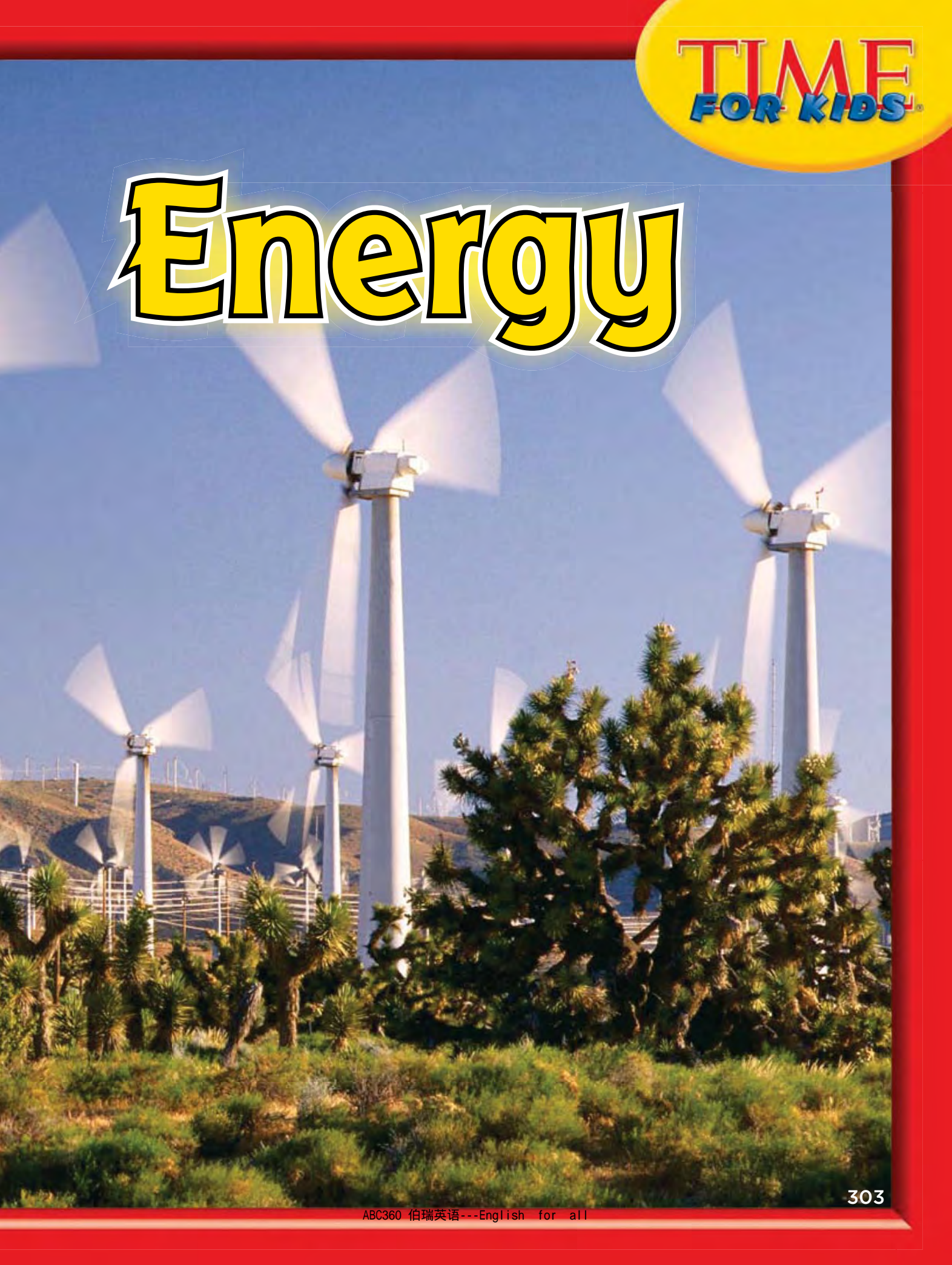
Talk About It

Why are people around the world working hard to find new, renewable sources of energy?



Find out more about energy at www.macmillanmh.com

Energy



Vocabulary

nonrenewable

renewable

adverse

generate

apparatus

SOURCES OF ENERGY

The energy we use in just about all aspects of our daily lives comes from two types of sources: **nonrenewable** and **renewable**.

Solar collectors



NONRENEWABLE Sources of Energy

Most of the energy we use comes from deposits of fossil fuels in the earth. These include coal, natural gas, and petroleum. Once these natural resources are used up, they are gone forever. Getting fossil fuels out of the earth involves drilling, mining, building pipelines, and other processes that can have **adverse** effects on the environment. Releasing the energy in fossil fuels requires combustion. This burning process releases pollutants that can contribute to acid rain and global warming.



Oil-drilling platform

RENEWABLE Sources of Energy

Renewable sources of energy are everlasting. Using them does not use them up. They generate much less pollution—both in gathering and production—than nonrenewable sources.

- ★ Solar energy comes from the sun. Solar panels on buildings convert sunlight to electricity.
- ★ Wind can **generate** electricity by turning a turbine, an **apparatus** with blades similar to a giant windmill.
- ★ Geothermal energy comes from heat in Earth's core. Engineers use the heat to create steam to generate electricity.
- ★ Dams and rivers generate hydropower. Water flowing through a dam activates a turbine that runs an electric generator.



Find out more about energy sources at

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ENERGY PRODUCERS AND CONSUMERS

Here's a look at the world's top 10 energy consumers and producers.

TOP 10 ENERGY PRODUCERS

1. United States
2. Russia
3. China
4. Saudi Arabia
5. Canada
6. United Kingdom
7. Iran
8. Norway
9. Australia
10. Mexico

TOP 10 ENERGY CONSUMERS

1. United States
2. China
3. Russia
4. Japan
5. Germany
6. India
7. Canada
8. France
9. United Kingdom
10. Brazil

(Source: Energy Information Administration, U.S. Dept. of Energy)

WIND POWER

Wind exists because the sun warms Earth's surface air unevenly. Warm air expands and rises. Cool air rushes in to take its place. The resulting air movement is wind. Technology can turn this wind—and the sun—into pollution-free energy.



- ✱ The wind that blows through North Dakota, South Dakota, and Texas could create enough electricity to meet the needs of the entire country.
- ✱ More than 10,000 U.S. homes are totally powered by solar energy.

- ✱ The largest wind farm in the world is in Altamont Pass, California. It has 6,500 windmills!
- ✱ If every shopping mall in the U.S. had solar panels on its roof, the panels would produce enough power for every house in the country!

(Sources: Solar Energy Research and Education Foundation; *The Wind at Work* by Gretchen Woelfle)