

Environmental Science Study Guide

Renewable Energy

1. Describe the two main problems with relying on nonrenewable energy resources, like fossil fuels.
2. Of all the sources of renewable electricity, which one is used the most?
3. Briefly list three specific ecological side-effects of constructing a dam.
4. What drawback do hydroelectric, solar, and wind power plants all have compared to coal and nuclear plants?
5. List three possible side-effects of building wind farms.
6. How do photovoltaic cells work differently than parabolic solar collection?
7. What form of renewable energy would be most appropriate for each of these states?

Pennsylvania –
Oregon –
Arizona –
Kansas –



8. Compare how **active solar heat** and **passive solar heat** structures work differently to gather heat from the sun.
9. How are **biofuels** generated? What is the downside of using biofuels over gasoline?
10. What is the chemical reaction that occurs in hydrogen fuel cells to generate power? What waste product(s) are produced?
 - a. What is the downside of using hydrogen as fuel for cars?
11. Which type of batteries is best suited for use in electric cars? Why?
12. An LED light bulb is 40% efficient, compared to an incandescent, which is 5% efficient. What exactly do these numbers mean?