

Chapter 19 review Questions

1. Which alternative energy sources are renewable and non-renewable?
2. How can each type of renewable resource be considered a form of solar energy?

19.2 Solar Energy

3. What does it mean to say that solar energy is “site specific?”
4. Describe the utilization of passive solar energy systems.
5. How do solar collectors work and what are they used for?
6. What is the efficiency of photovoltaics?
7. How do photovoltaics produce electricity?
8. Describe a variety of applications for photovoltaics.
9. What is a power tower and how does it work? How is it similar to and different from the Luz power plant design?

19.3 Hydrogen

10. Briefly describe how electricity is generated in a fuel cell (closer look 19.1)

19.4 Water power

11. How could pump storage be used to store energy?
12. What are some potential applications of Small scale hydropower systems?
13. What are the negative environmental impacts of water power?
14. Why does development of large scale water power in the future appear limited?

19.5 - Tidal Power

15. Why is tidal power only useful in specific locations?
16. How does tidal power generate electricity?

19.6 - Wind Power

17. Describe how sunlight causes wind.
18. Explain how topography effects wind movement.
19. Where is wind power most useful?

20. What are some negative environmental impacts of wind power?

19.7 - Biofuels

21. List several potential sources for biofuels.

22. What are some negative environmental impacts of biomass?

23. What do advocates of biomass energy argue are its important advantages?

24. Describe the future potential for the amount of energy that could be produced through biofuels.

19.8 Geothermal Energy

25. Describe how geothermal energy is used to generate electricity.

26. Where are some places where geothermal is practical? Why are these places good for geothermal?

27. What are some potential negative environmental impacts of geothermal energy?