

Name: _____ Date: _____ Block: _____

Miller and Spoolman's Living in the Environment 16th ed.

Chapter 16 Reading Guide – Nonrenewable Energy

Case Study – Iceland's Vision of a Renewable-Energy Economy

1. Describe Iceland's resources, vision, and transformation towards a renewable energy economy.

Section 16-1 – Why Is Energy Efficiency an Important Energy Resource?

2. Explain the importance and potential of energy efficiency.

Section 16-2 – How Can We Cut Energy Waste?

3. Identify and describe 10 technologies that can be used to cut energy waste and increase efficiency in the areas of industry, transportation, and buildings.
4. Explain the value of developing better batteries.
5. Why would you or would you not buy a plug-in with a lithium-ion battery?

Section 16-3 – What Are the Advantages and Disadvantages of Solar Energy?

6. Differentiate between passive solar heating systems and active solar heating systems.
7. Describe the advantages and disadvantages of solar energy.
8. Identify and describe three interesting examples to represent the possibilities of using solar energy.

Section 16-4 – What Are the Advantages and Disadvantages of Producing Electricity from the Water Cycle?

9. Identify ways electricity can be produced from the water cycle.
10. Describe the advantages and disadvantages of producing electricity from water.

Section 16-5 – What Are the Advantages and Disadvantages of Producing Electricity from Wind?

11. Explain how wind is used to produce electricity.
12. Describe the advantages and disadvantages of producing electricity from wind.

Section 16-6 – What Are the Advantages and Disadvantages of Biomass as an Energy Source?

13. Describe the different ways of using biomass as an energy source, focusing on diesel and ethanol.
14. Explain the advantages and disadvantages of using diesel and ethanol for energy.

Section 16-7 – What Are the Advantages and Disadvantages of Geothermal Energy?

15. Describe two different ways to use geothermal energy.
16. Describe the advantages and disadvantages of using geothermal energy.

Section 16-8 – What Are the Advantages and Disadvantages of Hydrogen as an Energy Source?

17. Briefly describe how a hydrogen fuel cell works and possible applications.
18. Describe the advantages and disadvantages to using hydrogen as an energy source.

Section 16-9 – How Can We Make a Transition to a More Sustainable Energy Future?

19. Explain the important components of transitioning to a more sustainable energy future.
20. Using figure 16-33, compare the list of solutions of what you can do be more sustainable in your energy use.