

# Renewable Energy Project

**DUE DATE:** \_\_\_\_\_

In this project you will investigate and present information on one form of renewable energy. The class will be divided into groups of four and choose a form of renewable energy. The types of renewable energies to choose from are: [solar](#), [geothermal](#), [wind](#), [hydroelectric](#), [hydrogen](#), [biofuels](#), and [methane](#).

There must be at least one group for each energy source so that the class will learn about all seven energy sources.

You may work with a team of up to four people to complete this task. Each person on the team will take on one of the following expert roles and have the responsibilities that go along with that role:

## The Research

**SCIENTIST:** You are concerned with understanding and explaining how this energy source works. At a minimum, answer the following questions in your presentation.

1. What is the source of power or raw materials for this energy source?
2. How does the system harness and transfer energy?
3. What are the by-products from this energy source?
4. Is it possible to use this energy source in our area of the country?

**ENVIRONMENTALIST:** You are concerned with the effects of this technology on nature. You want to explain how this new project could impact the natural surroundings. You would ideally want to see technology that will not produce greenhouse gases and that will not consume natural resources in such a way that would adversely affect future generations of both humans and other species. At a minimum, answer the following questions in your presentation.

1. Are there any harmful wastes produced by this technology?
2. Will natural habitats be adversely affected by this technology?
3. Are there any concerns to public health and safety?
4. How will using these energy resources contribute to global warming?

**ECONOMIST:** You are concerned about how much the technologies will cost. You want an energy source that is both efficient and cost effective, something that will give a return on the initial investment to put the technology in place. At a minimum, answer the following questions in your presentation.

1. How does the cost of this energy source compare to the current cost of fossil fuels in this area?
2. How much money will it cost to start to use this technology?
3. How much money will be saved by using this technology over the long term?
4. Does this technology create any extra employment opportunities?

**HISTORIAN/SOCIOLOGIST:** You are concerned with how this energy source has been used around the world. Humans have always used energy to improve their quality of life. Many different types of energy have been used in different regions and at different times in history. At a minimum, answer the following questions in your presentation.

1. When was this energy source first discovered or invented?
2. Where in the United States or other countries is this energy source currently used?
3. How easily do you think our community would accept using this new energy source?
4. How much energy is currently produced using this technology?
5. How has this technology affected the lives of the people who use it?

## **The Presentation**

After completing your research, you will present your information to the group. Your group's presentation should include:

- A "documentary film" that includes pictures that show how your energy source is used.
- A written report with information from each of your team member experts. Each team member should prepare 2 to 3 pages typed, double-spaced. It should include a bibliography of all references used.
- A diagram, scale model that will help the class visualize how the energy source works.

# Alternative Energy Project

Student Names: \_\_\_\_\_

Class Period: \_\_\_\_\_

Film	Typed Report	Model	Points	
			Student Check	Teacher Check
Answers all questions <b>(33)</b>	Paper free of grammatical errors. <b>No</b> plagiarism. All works cited. Paper 8 to 12 pages in length. <b>(33)</b>	Exactly resembles the real thing <b>(33)</b>		
Answers most questions <b>(25)</b>	Paper mostly free of grammatical errors. <b>No</b> plagiarism. Most works cited. Paper within 1 page of 8 to 12 pages in length. <b>(25)</b>	Closely resembles the real thing <b>(25)</b>		
Answers some questions <b>(16)</b>	Paper somewhat free of grammatical errors. <b>No</b> plagiarism. <b>NO</b> works cited. Paper within 3 pages of 8 to 12 pages in length. <b>(16)</b>	Somewhat resembles the real thing <b>(16)</b>		
Answers few questions <b>(10)</b>	Paper littered with grammatical errors. Plagiarism evident. <b>NO</b> works cited. Paper considerably shorter or longer than 8 to 12 pages <b>(10)</b>	Doesnt resemble the real thing or no model present <b>(10)</b>		