

## EarthComm Earth's Natural Resources: Energy Resources and Your Community Activity 2

### This investigation will help you to:

- Generating Electric Energy
- Fossil Fuels and Nuclear Energy
- Hydroelectric Power
- Other Resources Used to Generate Electricity
- To complete the investigation, each student group will need:
- To learn more about storage of solar energy, visit the following web site:
- To learn more about energy from the oceans, visit the following web sites:
- To learn more about other methods of generating electricity, visit the following web sites:

#### Generating Electric Energy

- "Electricity Supply and Demand Fact Sheet" - EIA - DOE  
This site reviews the current issues facing electricity generation in the United States and explains how industry deals with these issues.
- "Electric Power Industry Overview" - EIA - DOE  
This page contains links to pages that give information on various aspects of the electric power industry.

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#### Fossil Fuels and Nuclear Energy

- "Coal" - DOE  
Online tutorial is designed for students. Explains how coal is used and how fossil fuels are formed.
- "Uranium Facts" - Office of Nuclear Energy  
Site uses an illustration to explain the nuclear fuel cycle and includes several facts about uranium and its use as a source of nuclear power.

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#### Hydroelectric Power

- "Hydropower Basics" - EREN - DOE  
Site introduces the use of water as an energy resource.
- "Hydroelectric Power" - National Renewable Energy Laboratory  
Site gives resources on hydroelectric power, including the history of its use, how it works, and the different types of hydropower plants.

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### Other Resources Used to Generate Electricity

- "Biomass Basics" - EREN - DOE  
Site introduces the use of biomass as an energy resource. Click on the "Back to Bioenergy" button at the top of the page to visit a new page that contains detailed links for more information about biomass resources, biopower, biofuels, and more.
- "Wind Energy Basics" - EREN - DOE  
Site introduces the use of wind as an energy resource.
- "Geothermal Energy Basics" - EREN - DOE  
Site introduces the use of geothermal heat as an energy resource.
- Solar Energy - EREN - DOE  
Site introduces the use of the Sun as an energy resource.
- "Ocean Energy Systems" - European Commission  
This site reviews the basics of ocean thermal energy conversion (OTEC) and wave power plants, including how they work and the advantages and disadvantages of using the oceans as an energy resource. Includes illustrations of the different type of ocean-powered plants.

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To complete the investigation, each student group will need:

- **Internet access:**
  - To obtain copies of your "state electricity profile," visit the Energy Information Administration State Electricity Profiles page. Profiles can be viewed in either PDF (requires Adobe Acrobat) or HTML format

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To learn more about storage of solar energy, visit the following web site:

- Solar Energy - EREN - DOE  
Site introduces the use of the Sun as an energy resource. Click on the "Back to Solar Energy" button at the top of the page to visit a new page that contains detailed links for more information about photovoltaics, passive solar heating and cooling, solar water heating, issues surrounding the use of solar power, and more.

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To learn more about energy from the oceans, visit the following web sites:

- "Ocean Energy Systems" - European Commission  
This site reviews the basics of ocean thermal energy conversion (OTEC) and wave power plants, including how they work and the advantages and disadvantages of using the oceans as an energy resource. Includes illustrations of the different type of ocean-powered plants.

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To learn more about other methods of generating electricity, visit the following web sites:

- "Biomass Basics" - EREN - DOE  
Site introduces the use of biomass as an energy resource. Click on the "Back to Bioenergy" button at the top of the page to visit a new page that contains detailed links for more information about biomass resources, biopower, biofuels, and more.
- "Wind Energy Basics" - EREN - DOE  
Site introduces the use of wind as an energy resource. Click on the "Back to Wind Energy" button at the top of the page to visit a new page that contains detailed links for more information about wind energy technologies, wind turbine use, costs

of use, and more.

- "Geothermal Energy Basics" - EREN - DOE

Site introduces the use of geothermal heat as an energy resource. Click on the "Back to Geothermal Energy" button at the top of the page to visit a new page that contains detailed links for more information about geothermal exploration, drilling, use and more.

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