

Energy Sources

The world's energy sources fall into two different categories. List the different energy sources in the box below under either "Power/Electricity" or "Fuels".

Gasoline	Coal	Hydro Power	Geothermal Power
Natural Gas	Oil	Wind Power	Nuclear Power
Solar Power	Biomass (<i>corn, sugarcane, food waste, algae</i>)		



Power / Electricity

This energy comes from some force generating a turbine to create electricity to be used.



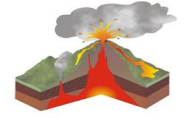
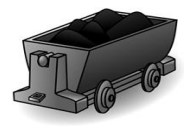
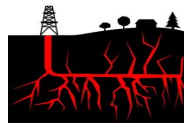
Fuels

This energy comes from using or burning a kind substance or fuel to make electricity or another kind of heat energy.

Write all the energy sources (Powers and Fuels) from the lists above beside the picture that describes them.



Wind Power



What are the best energy sources we should be using in the following places?

- a windy village - Egypt - Hawaii - Niagara Falls - the moon - near farmland

Classify the Energy

Energy sources can be “Dirty Energy” or “Clean Energy” (Clean/Green Energy).
Energy sources can also be “Renewable Energy” or “Non-Renewable Energy”.

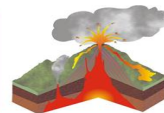
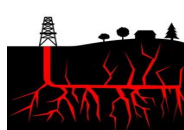
Look at the pictures below and discuss which picture is best for each kind of energy. Explain why you think that picture shows clean/dirty/renewable/non-renewable.



Now write some sentences to put all the new vocabulary together. Look at all 10 energy sources then write and speak about each power source as clean/dirty/renewable/non-renewable



Wind Power is a clean and renewable energy source

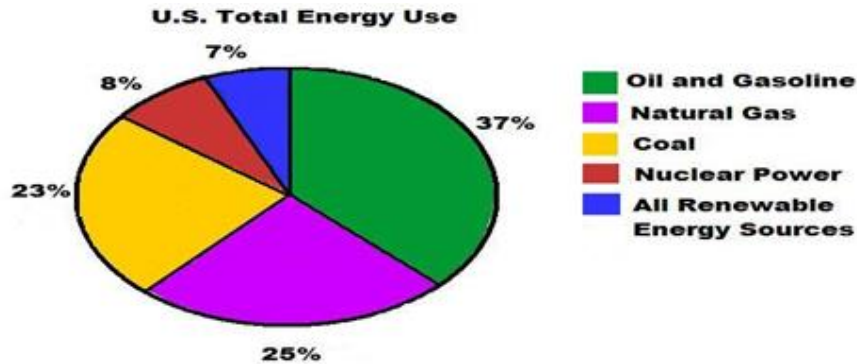


Now discuss where each energy source gets its power or energy from.

- Where in nature does the energy come from?
- How long does it take to create?
- Is it expensive to harvest this energy?
- Do we need a lot of technology to use this kind of energy?
- Is it commonly used in your country or in other parts of the world?
- Where is it a good idea to use this energy?

America's Total Energy Use

Look at the pie chart below and make sentences to describe the data graphed on it. Use sentences that have **the most / the least / more than / less than**.



- [1] Americans use coal power **more than** nuclear power. _____
- [2] _____
- [3] _____
- [4] _____
- [5] _____
- [6] _____
- [7] _____

American Energy Discussion

- [1] Why do you think oil and gasoline are used the most?
- [2] Why do you think renewable energy sources are used the least?
- [3] Does anything surprise you about the data on the pie chart?
- [4] What are the advantages and disadvantages to using energy this way?
- [5] How do you think America's energy use will change in the next 20 years?
- [6] Do you think your countries energy use is the same or different? How?

Label each dirty and non-renewable energy source below by its name.

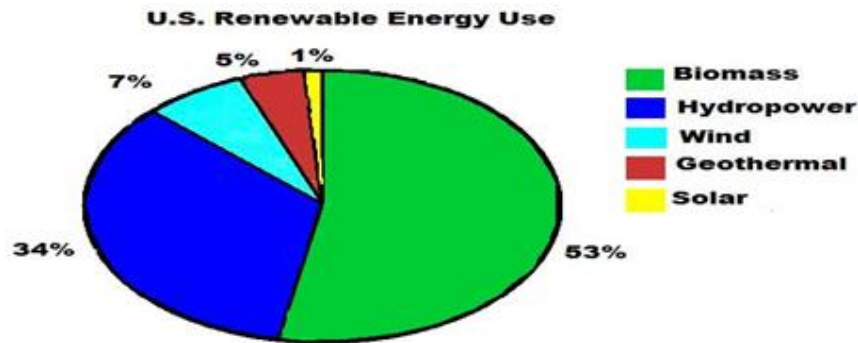


General Energy Discussion

- [1] What do we use each fuel or energy source for in our countries and our lives?
- [2] Which energy source or fuel is the most harmful to our environment?
- [3] What accidents have happened or can happen with each of them?

America's Renewable Energy Use

Look at the pie chart below and make sentences to describe the data graphed on it. Use sentences that have **the most / the least / more than / less than**.



- [1] Americans use wind power **more than** solar power. _____
- [2] _____
- [3] _____
- [4] _____
- [5] _____
- [6] _____
- [7] _____

American Renewable Energy Discussion

- [1] Why do you think biomass or bio fuels are used the most?
- [2] Why do you think solar energy sources are used the least?
- [3] Does anything surprise you about the data on the pie chart?
- [4] What are the advantages and disadvantages to using energy this way?
- [5] How do you think the use or renewable energy will change in the next 20 years?

Label each clean and renewable energy source below.

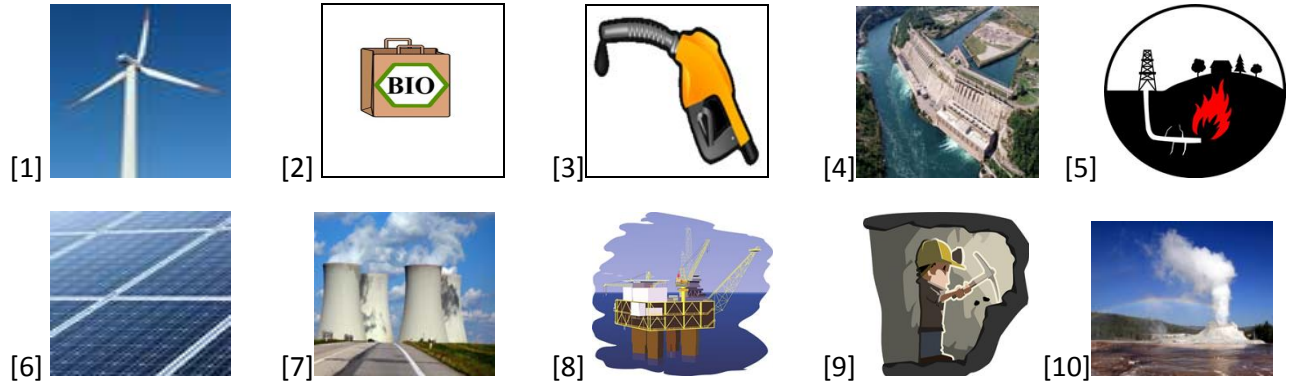


General Renewable Energy Discussion

- [1] What renewable energy sources are used a lot in your country?
- [2] Give some examples of how we could use each energy source?
- [3] Why doesn't the world use clean and renewable energy more?

Homework

Write sentences for all 10 energy sources as clean/dirty/renewable/non-renewable.



- [1] Wind power is a clean and renewable energy.
- [2] _____
- [3] _____
- [4] _____
- [5] _____
- [6] _____
- [7] _____
- [8] _____
- [9] _____
- [10] _____

Clean and renewable energy sources	Dirty and non-renewable energy sources
Coal	Coal
Solar Power	Solar Power
Geothermal Power	Geothermal Power
Wind Power	Wind Power
Biomass fuel	Biomass fuel
Oil	Oil
Nuclear Power	Nuclear Power
Hydro Power	Hydro Power
Natural Gases	Natural Gases
Gasoline	Gasoline

Writing Assignment: Write a 2 paragraph answer to answer the following two questions
 -Why do you think the world uses so much dirty non-renewable energy?
 -How can the world can move to use more clean and non-renewable energies?

Vocabulary Lesson – Energy Sources

PRESENTATION:

1. Teach the Target Vocabulary as a class centered activity using "Energy Sources"

-First ask what the difference between power vs. fuel, let s/s speculate then define with them.

-Next have students classify each energy source in the box as either power/fuel and list under correct spot.

-Next have them label the pictures with the same energy sources in the box.

-Finally have s/s tell you what resources are best suited for the locations at the bottom of the page.

windy village([wind power](#)) Egypt([solar](#)) Hawaii([geothermal](#)) Niagara Falls([Hydro](#)) moon([solar/nuclear](#)) farmland([bio fuel](#))

-have s/s give a reason why they feel that power should be used in that place.

PRACTICE & PRODUCTION:

1. Have s/s in pairs or small groups using "Classify the energy"

-Have s/s guess which picture depicts which way to describe energy **Answers:** [clean/dirty/renewable/non-renew](#)

-Ask them to explain why they think the picture shows that adjective well.

-Have s/s speak a sentence for each picture of energy type as clean/dirty & renew/non-renew.

Answers:

[Wind power-clean, renewable](#) / [Coal -dirty, non-renewable](#) / [Solar power-clean, renewable](#) / [Natural gas-clean, non-renewable](#)

[Bio Fuels-\(clean, a little dirty from oil used in farming\), renew](#) / [Hydro-clean, renew](#) / [Nuclear\(clean/dirty accidents\), renew](#)

[Gasoline-dirty, non-renewable](#) / [Geothermal-clean, renewable](#) / [Oil-dirty, non-renewable](#)

-Have s/s discuss in groups topics a-f. Teacher can hot correct and monitor discussions.

2. Have s/s in pairs or small groups using "America's Total Energy Use"

-s/s should speak about to describe the graph first then write down their answers.

[1] [Americans use coal power **more than** nuclear power](#)

[2] [Americans use oil and gas the most.](#)

[3] [Americans use renewable energy sources the least.](#)

[4] [America uses wind power less than geo thermal.](#)

[5] [Americans use geothermal just a little less than wind.](#)

[6] [Americans use renewable energy less than Nuclear power.](#)

-use the "American Energy Discussion" questions now.

-last label the pictures for review of vocabulary for energy in the graph.

Answers:[oil/coal/gasoline/natural gas/nuclear](#)

3. Have s/s in pairs or small groups using "America's Renewable Energy Use"

-s/s should speak about to describe the graph first then write down their answers.

[1] [Americans uses wind power **more than** solar power](#)

[2] [Americans use bio fuels the most.](#)

[3] [Americans use solar power the least.](#)

[4] [America uses Nuclear power less than coal.](#)

[5] [Americans use natural gas just a little more than coal.](#)

[6] [Americans use renewable geothermal more than solar.](#)

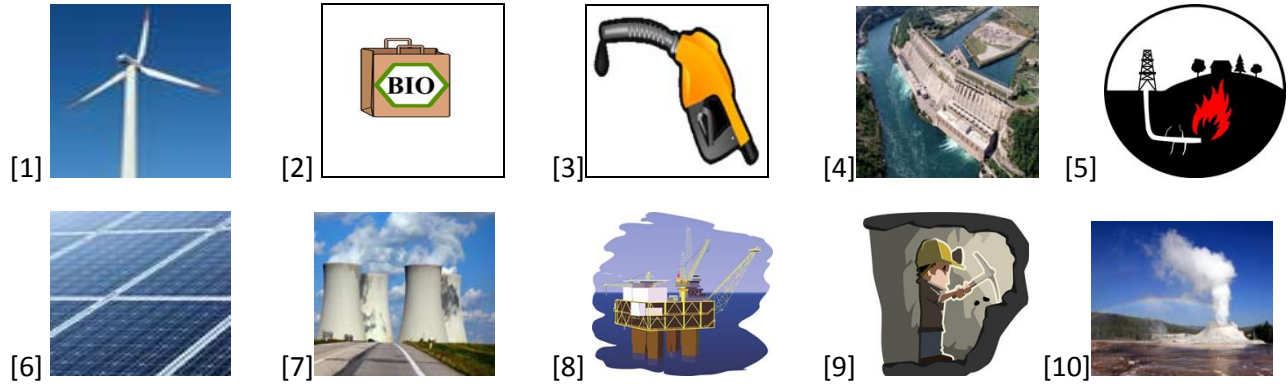
-use the "American Energy Discussion" questions now.

-last label the pictures for review of vocabulary for energy in the graph.

Answers:[wind power/bio fuels/geothermal/hydro power/solar power](#)

Homework - Answers

Write sentences for all 10 energy sources as clean/dirty/renewable/non-renewable.



- [1] Wind power is a clean and renewable energy.
- [2] Bio fuels are clean (but not perfect) and renewable source of energy.
- [3] Gasoline is a dirty and non-renewable energy.
- [4] Hydro-electric power is a clean (but dams harm the environment) and renewable energy.
- [5] Natural gas is a relatively clean and non renewable energy source.
- [6] Solar power is a clean and renewable energy source.
- [7] Nuclear power is a clean (with dirty accidents) and renewable energy.
- [8] Oil is a dirty and non renewable energy source.
- [9] Coal is a dirty and non renewable energy source.
- [10] Geothermal power is a clean and renewable energy source.

Clean and renewable energy sources	Dirty and non-renewable energy sources
Coal Solar Power Geothermal Power Wind Power Biomass fuel Oil Nuclear Power Hydro Power Natural Gases Gasoline	Coal Solar Power Geothermal Power Wind Power Biomass fuel Oil Nuclear Power Hydro Power Natural Gases Gasoline