Renewable vs. Non-Renewable Resources

Nonrenewable Resources

- A **non-renewable resource** is a resource that cannot be replenished as quickly as they are used.
- Non-renewable resources such as **coal**, **petroleum**, **natural gas**, and **uranium** require millions of years to form.
- The usage of nonrenewable resources often harms the environment.

Study Tip

The Hoover Dam generates 4 billion kilo-watt hours of power each year through renewable hydroelectric energy.

Renewable Resources

- A **renewable resource** is a resource that can be replenished as quickly as they are used.
- Renewable resources include solar, water, wind, biomass, and geothermal energy.
- However, renewable resources are expensive, and tend to serve other purposes other than the creation of energy.

Energy can be harnessed through many different means, such as wind energy.

Energy Consideration

- When creating energy, there are two main things we must consider.
  - There must be a practical method of converting the resource into energy.
  - We must consider the consequences of using this energy.
- Our society relies on energy on a large scale, so it is important to consider how efficiently and effectively we transport energy.
  - Old electrical grids are inefficient, and have high failure rates. New electrical grids, or **smart grids**, streamline the distribution of electricity more efficiently.

Concept Check

- What are the different types of renewable energy?
- Why are certain types of energy considered “renewable”?
- Is it always worth it to use a renewable energy source? When could it be harmful to do so?