READING PASSAGE: ENERGY EFFICIENCY

Energy efficiency is a very broad term referring to the many different ways we can get the same amount of work (light, heat, motion, etc.) done with less energy. It covers efficient cars, energy saving lighting, improved industrial practices, better building insulation and a host of other technologies. Since saving energy and saving money often amount to the same thing, energy efficiency is highly profitable.

Efficient energy use, sometimes simply called energy efficiency, is reducing the amount of energy required to provide products and services. For example, insulating a home allows a building to use less heating and cooling energy to achieve and maintain a comfortable temperature. Installing compact fluorescent or LED lights reduces the amount of energy required to attain the same level of illumination compared to using traditional incandescent light bulbs. Compact fluorescent light bulbs use two-thirds less energy and may last 6 to 10 times longer than incandescent lights.

There are various motivations for improving energy efficiency. Reducing energy use reduces energy costs. Reducing energy use is also seen as a key solution to the problem of reducing harmful emissions generated by coal-burning power plants. According to the International Energy Agency, improved energy efficiency in buildings, industrial processes, and transportation could reduce the world's energy needs in 2050 by one third, and help control global emissions of greenhouse gases.

Since we currently generate about half of our electricity in the United States from coal-fired power plants, the choices we make about electricity consumption have a significant impact on the amount of carbon dioxide (CO_2) released into the atmosphere. CO_2 is one of the major gases that traps heat in our atmosphere. Every kilowatt-hour (kWh) of electricity that we consume in the US—approximately $0.16 worth of electricity—generates 0.39 kgs CO2e (e signifies the amount of CO2 which would have an impact on global warming). The amount of CO_2 per kWh changes in different parts of the country, due to the major sources of electrical energy.

STATE	KILOGRAMS CO2 PER KWH	DOMINANT FUEL SOURCES
Alabama	0.35	coal, nuclear, gas
Alaska	0.54	gas, oil, hydro
Arizona	0.31	coal, gas, nuclear
Arkansas	0.48	coal, nuclear, gas
California	0.23	gas
Colorado	0.55	coal, gas
Connecticut	0.25	nuclear, gas
Delaware	0.57	coal, gas
Washington, DC	0.53	oil
Florida	0.39	gas, coal
Georgia	0.35	coal, nuclear
Hawaii	0.70	oil
Idaho	0.15	hydro
Illinois	0.31	nuclear, coal
Indiana	0.75	coal
Iowa	0.75	coal
Kansas	0.40	coal

Kentucky	0.80	coal, gas
Louisiana	0.46	gas, nuclear
Maine	0.21	gas, hydro, wind
Maryland	0.31	nuclear, gas
Massachusetts	0.43	gas, bimass, solar
Michigan	0.48	nuclear, coal, gas
Minnesota	0.39	nuclear, coal, gas, wind
Mississippi	0.38	gas, nuclear
Missouri	0.77	coal, wind
Montana	0.51	coal, hydro
Nebraska	0.56	coal, wind
Nevada	0.33	gas, solar
New Hampshire	0.13	nuclear, gas
New Jersey	0.24	nuclear, gas
New Mexico	0.49	coal, gas, wind
New York	0.23	gas, nuclear, hydro
North Carolina	0.32	gas, nuclear, coal
North Dakota	0.64	coal, wind
Ohio	0.55	coal, gas, nuclear
Oklahoma	0.34	gas, wind
Oregon	0.14	hydro, gas
Pennsylvania	0.33	gas, nuclear
Rhode Island	0.38	gas
South Carolina	0.26	nuclear, coal, gas
South Dakota	0.15	hydro, wind
Tennessee	0.34	nuclear, coal, gas
Texas	0.43	gas, coal, wind
Utah	0.70	coal, gas
Vermont	0.004	hydro, wind, solar
Virginia	0.29	nuclear, gas
Washington	0.10	hydro, gas
West Virginia	0.88	coal
Wisconsin	0.57	coal, gas, wind
Wyoming	0.84	coal, wind

Energy efficiency and renewable energy, such as wind power, are said to be the twin pillars of a sustainable energy future.[6] In many countries, energy efficiency is also seen to have a national security benefit because it can reduce the need for energy imports (i.e. petroleum and coal) from foreign countries and may slow down the rate at which domestic energy resources are depleted.

Modern energy-efficient appliances, such as refrigerators, dishwashers, and clothes washers, use significantly less energy than older appliances. Current energy-efficient refrigerators, for example, use 40% less energy than conventional models did in 2001.

Energy conservation is broader than energy efficiency and includes active efforts to decrease energy consumption, such as behavioral change. Examples of conservation without efficiency include lowering the temperature on the thermostat during the winter, turning off the light(s) when leaving a room, and riding a bike or walking instead of driving a car.