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| **Glossary** |  |
| **Chapter 16** |  |
| **active solar heating system** | System that uses solar collectors to capture energy from the sun and store it as heat for space heating and water heating. Liquid or air pumped through the collectors transfers the captured heat to a storage system such as an insulated water tank or rock bed. Pumps or fans then distribute the stored heat or hot water throughout a dwelling as needed. Compare passive solar heating system. |
| **biofuel** | Gas (such as methane) or liquid fuel (such as ethyl alcohol or biodiesel) made from plant material (biomass). |
| **biomass** | Organic matter produced by plants and other photosynthetic producers; total dry weight of all living organisms that can be supported at each trophic level in a food chain or web; dry weight of all organic matter in plants and animals in an ecosystem; plant materials and animal wastes used as fuel. |
| **cogeneration** | Production of two useful forms of energy, such as high-temperature heat or steam and electricity, from the same fuel source. |
| **combined heat and power (CHP) production** | Production of two useful forms of energy, such as high-temperature heat or steam and electricity, from the same fuel source. See cogeneration. |
| **energy efficiency** | Percentage of the total energy input that does useful work and is not converted into low-quality, generally useless heat in an energy conversion system or process. See energy quality, net energy. Compare material efficiency. |
| **geothermal energy** | Heat transferred from the earth's underground concentrations of dry steam (steam with no water droplets), wet steam (a mixture of steam and water droplets), or hot water trapped in fractured or porous rock. |
| **hydroelectric power plant** | Structure in which the energy of falling or flowing water spins a turbine generator to produce electricity. |
| **hydropower** | Electrical energy produced by falling or flowing water. See hydroelectric power plant. |
| **mass transit** | Buses, trains, trolleys, and other forms of transportation that carry large numbers of people. |
| **passive solar heating system** | System that, without the use of mechanical devices, captures sunlight directly within a structure and converts it into low-temperature heat for space heating or for heating water for domestic use. Compare active solar heating system. |
| **photovoltaic (PV) cell** | Device that converts radiant (solar) energy directly into electrical energy. Also called a solar cell. |
| **solar cell** | Device that converts radiant (solar) energy directly into electrical energy. Also called a solar cell. See photovoltaic cell. |
| **solar thermal system** | System that uses any of various methods to collect and concentrate solar energy in order to boil water and produce steam for generating electricity. Compare solar cell. |
| **superinsulated house** | House that is heavily insulated and extremely airtight. Typically, active or passive solar collectors are used to heat water, and an air-to-air heat exchanger prevents buildup of excessive moisture and indoor air pollutants. |
| **wind farm** | Cluster of wind turbines in a windy area on land or at sea, built to capture wind energy and convert it into electrical energy. |

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