**Solar energy uses the sun as a source of heat, light or power.** Power production comes from such active solar energy as photovoltaic cells, while natural light and heat require only proper orientation of a structure to reap the most benefits from the sun.

Solar energy takes two forms: passive and active. Passive solar energy does not require any additional electronics or mechanics and relies solely on the design and orientation of a structure. The orientation of a building, the size and placement of its windows and the type of insulation all play a part in efficient passive solar power. Structures using passive solar energy effectively achieve heating, cooling and lighting while minimizing energy costs.

Active solar energy relies on such devices as solar photovoltaic cells to capture energy from the sun. These cells use semiconducting materials to create an electrical charge upon contact with sunlight. A circuit passes this charge to any device requiring electricity. Photovoltaic cells are useful as single panels for small-scale energy needs or in larger arrays to produce energy for larger homes or facilities.

Because solar energy is inherently intermittent, many solar power systems utilize some means of storing energy for cloudy days. When storage is not possible, a backup power system provides energy when necessary.