

**feed-in tariff:** A program of public policy intended to promote renewable energy investment, whereby utilities are mandated to purchase electricity from homeowners or businesses that generate power from renewable energy sources and feed it into the electrical grid. Under such a system, utilities must pay guaranteed premium prices for this power under long-term contract.

**green-collar job:** A job resulting from an employment opportunity in a more sustainably oriented economy, such as a job in renewable energy.

**solar energy:** Energy from the sun. It is perpetually renewable and may be harnessed in several ways.

**passive solar energy collection:** An approach in which buildings are designed and building materials are chosen to maximize direct absorption of sunlight in winter and to keep the interior cool in the summer.

**active solar energy collection:** An approach in which technological devices are used to focus, move, or store solar energy.

**Concentrated solar power (CSP):** A means of generating electricity at a large scale by focusing sunlight from a large area onto a smaller area. Several approaches are used.

**photovoltaic (PV) cells:** A device designed to collect sunlight and directly convert it to electrical energy. When light strikes one of a pair of metal plates in the cell, this causes the release of electrons, which are attracted by electrostatic forces to the opposing plate. The flow of electrons from one plate to the other creates an electrical current.

**thin-film solar cells:** A photovoltaic material compressed into an ultra-thin lightweight sheet that may be incorporated into various surfaces to produce photovoltaic solar power.

**net metering:** Process by which homeowners or businesses with photovoltaic systems or wind turbines can sell their excess solar energy or wind power to their local utility.

**wind power:** A source of renewable energy, in which kinetic energy from the passage of wind through wind turbines is used to generate electricity.

**wind turbines:** A mechanical assembly that convert the wind's kinetic energy, or energy of motion, into electrical energy.

**wind farm:** A development involving a group of wind turbines.

**not-in-my-backyard (NIMBY):** Syndrome in which people do not want something (e.g., a polluting facility) near where they live, even if they may want or need the thing to exist somewhere.

**geothermal energy:** Thermal energy that arises from beneath Earth's surface, ultimately from the radioactive decay of elements amid high pressures deep underground. Can be used to generate electrical power in power plants, for direct heating via piped water, or in ground-source heat pumps.

**ground-source heat pumps:** A pump that harnesses geothermal energy from near-surface sources of earth and water to heat and cool buildings. Operates on the principle that temperatures belowground are less variable than temperatures aboveground.

**enhanced geothermal systems (EGS):** A new approach whereby engineers drill deeply into rock, fracture it, pump in water, and then pump it out once it is heated belowground. This approach would enable us to obtain geothermal energy in many locations.

**wave energy:** Energy harnessed from the motion of ocean waves. Many designs for machinery to harness wave energy have been invented, but few have been adequately tested.

**tidal energy:** Energy harnessed by erecting a dam across the outlet of a tidal basin. Water flowing with the incoming or outgoing tide through sluices in the dam turns turbines to generate electricity.

**ocean thermal energy conversion (OTEC):** An energy source (not yet commercially used) that involves harnessing the solar radiation absorbed by tropical ocean water by strategically manipulating the movement of warm surface water and cold deep water.

**fuel cell:** A device that can store and transport energy to produce electricity, much as a battery can. A hydrogen fuel cell generates electricity by the input of hydrogen fuel and oxygen, producing only water as a waste product.