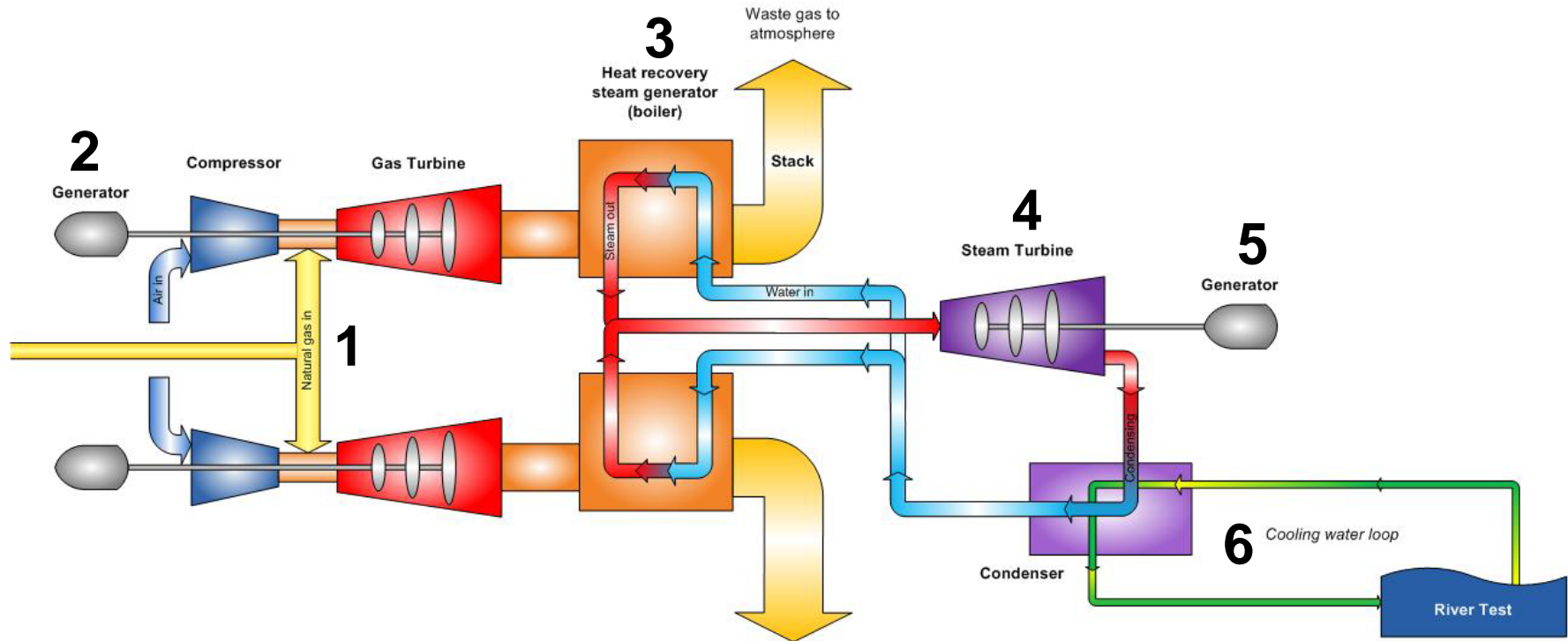
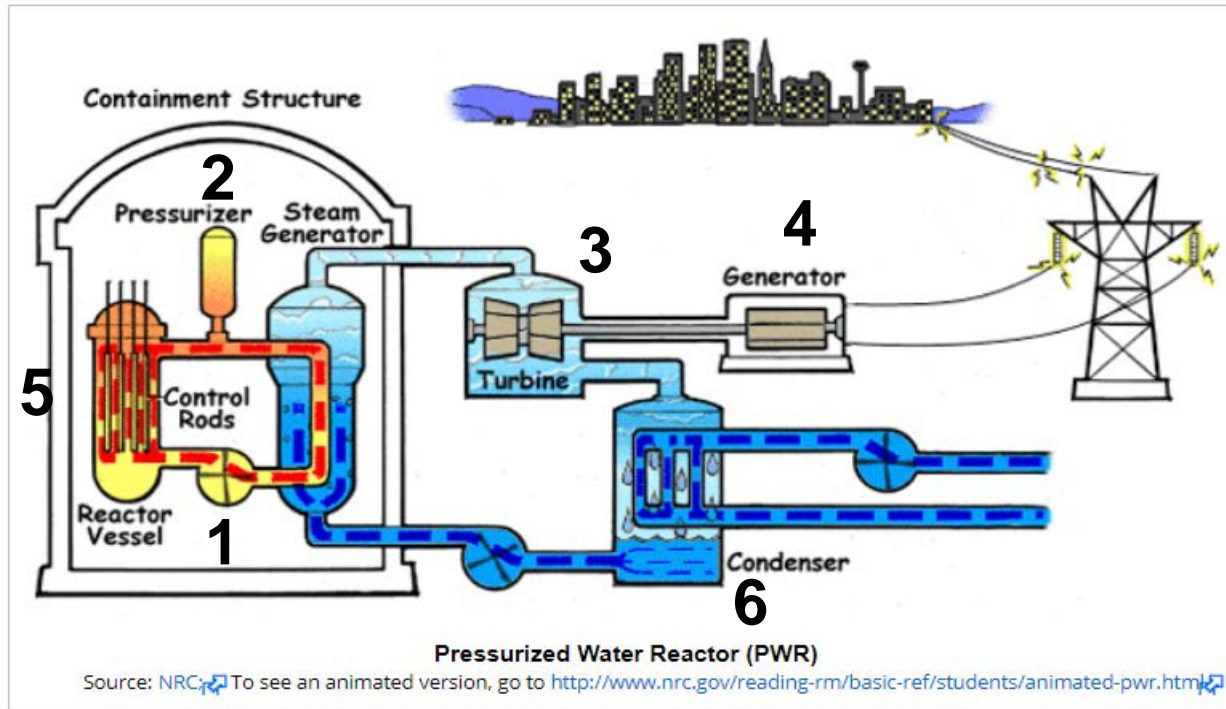


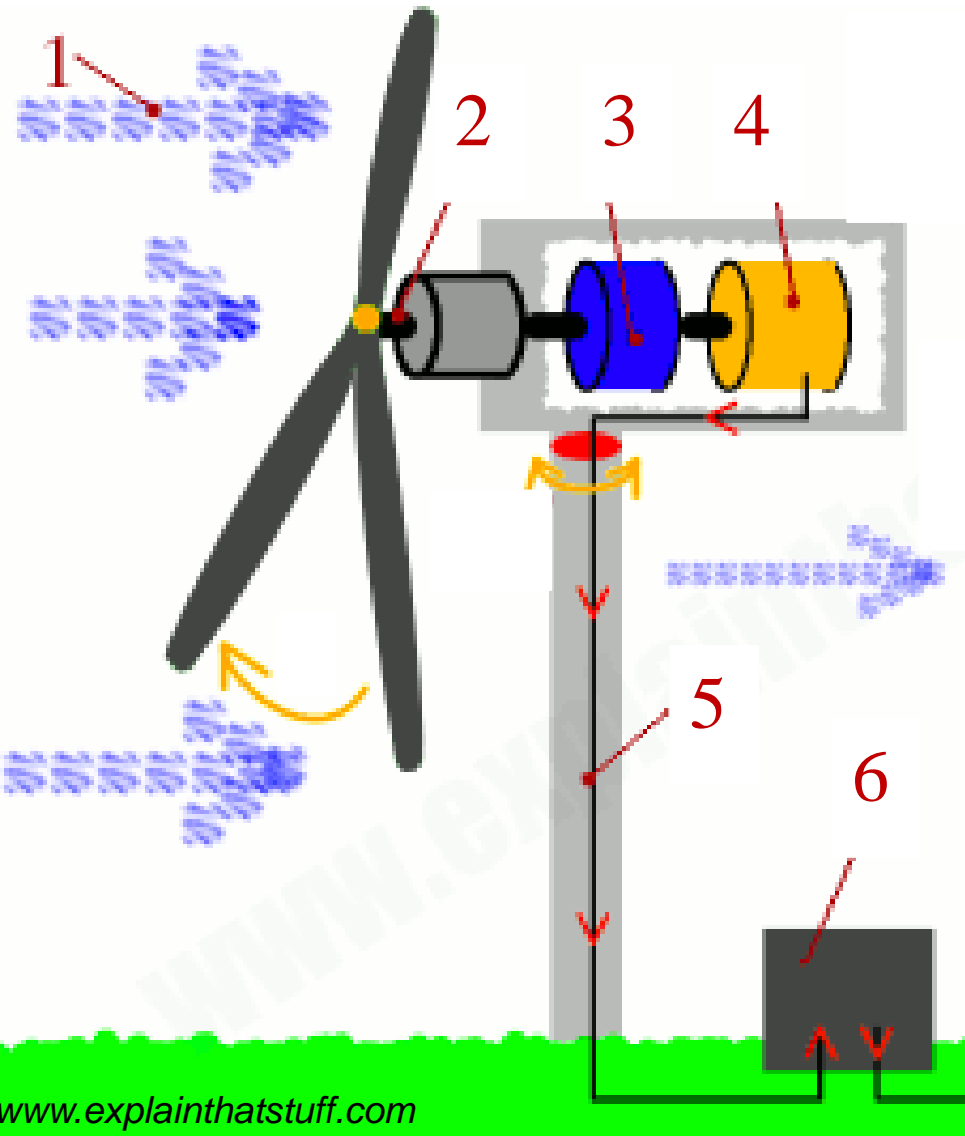
1. *Coal is pulverized and fed into a large furnace*
2. *The furnace heats water-filled tubes to produce steam*
3. *Steam is transferred under pressure which turns the turbine*
4. *Turbine is connected to a generator rotor*
5. *As the generator rotor spins, a flow of electrons is created to produce electricity*
6. *Steam is condensed back to water and cooled by a water supply, then reused*



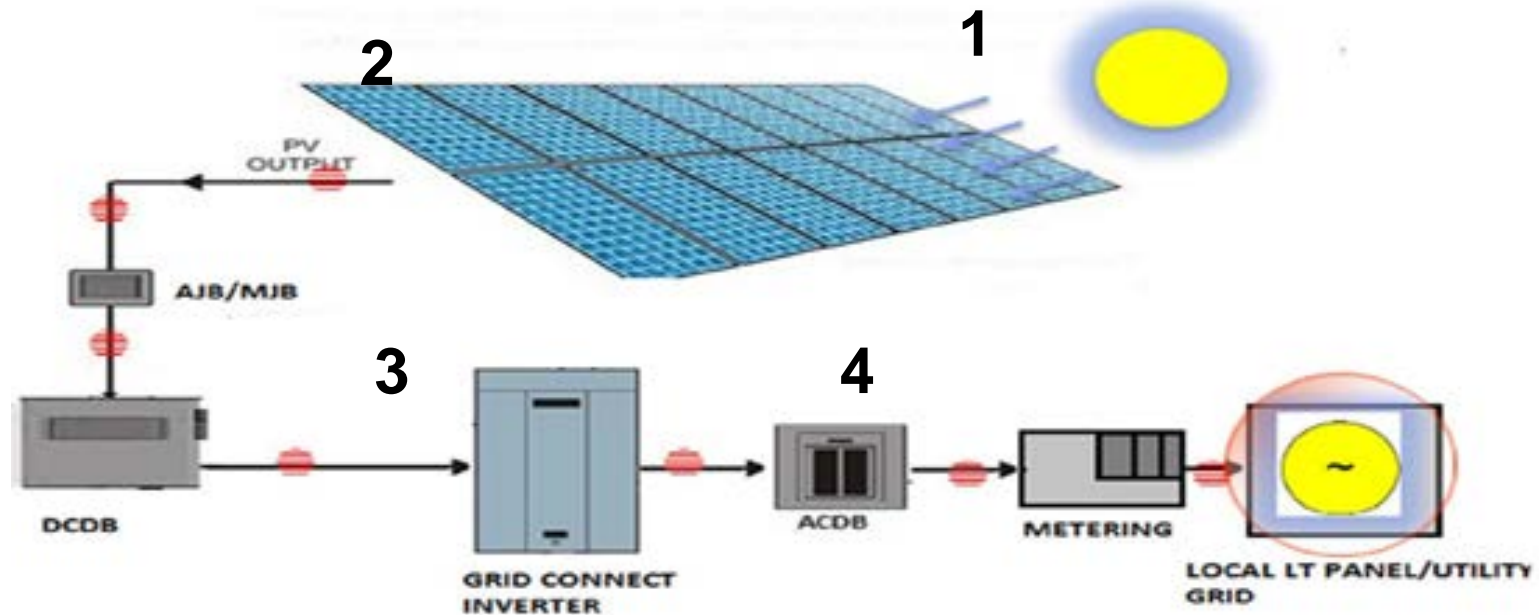
1. Natural gas heats air to spin the gas turbine(s)
2. Gas turbine(s) connected to generators convert mechanical energy of the turbine into electricity
3. Exhaust heat from gas turbine(s) used to boil water into steam
4. Steam is transferred under pressure which turns another turbine connected to a generator rotor
5. As the generator rotor spins, a flow of electrons is created to produce electricity
6. Steam is condensed back to water and cooled by a water supply, then reused



1. *Rods of uranium are arranged in a bundle and immersed in a pressurized water tank*
2. *High-speed particles, neutrons, strike the uranium atoms and cause them to split; a process called fission*
3. *The process releases energy, which heats the water that is piped into the steam generator*
4. *As the generator rotor spins, a flow of electrons is created to produce electricity*
5. *Control rods that absorb neutrons are lowered into the reactor to manage the process of fission*
6. *Steam is condensed back to water, cooled and reused*

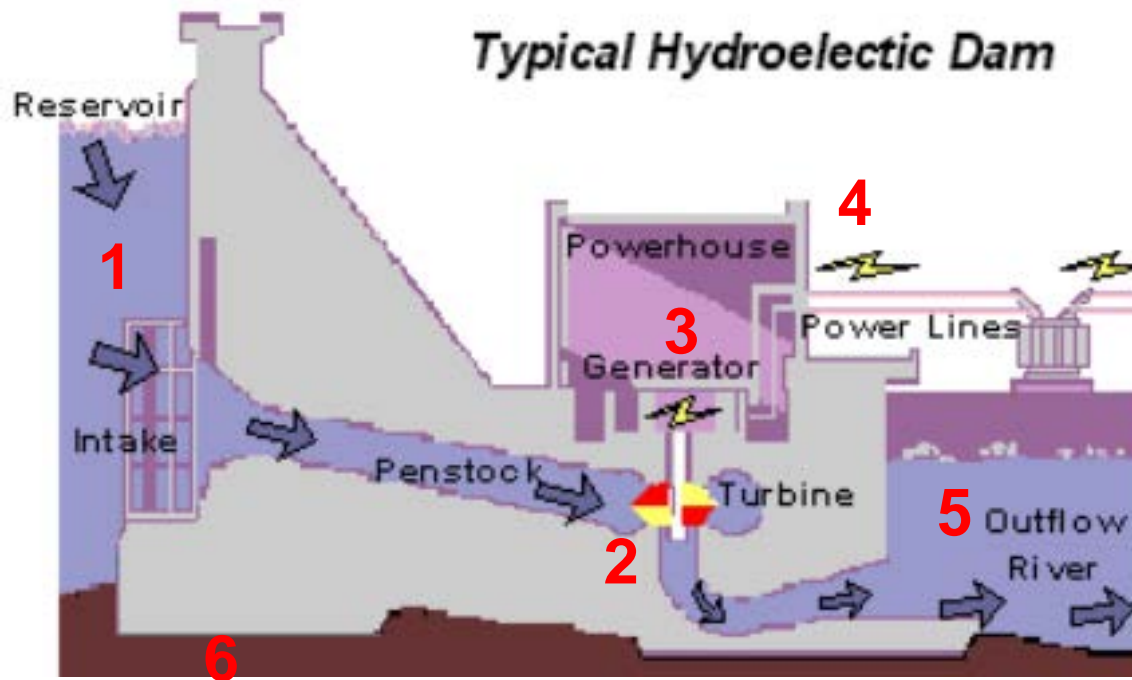


1. Wind causes the rotors spin, capturing kinetic energy from the wind, and turning the central drive shaft
2. Rotor blades can swivel on the hub at the front to meet the wind at the best angle (or "pitch") for harvesting energy
3. The gearbox converts low-speed rotation of the drive shaft into high-speed rotation fast enough to drive the generator
4. The generator takes kinetic energy from the spinning drive shaft and turns it into electrical energy
5. The electric current produced by the generator flows through a cable running down through the inside of the turbine tower
6. A step-up transformer converts the electricity to about 50 times higher voltage so it can be transmitted efficiently to the power grid



1. Photovoltaic (solar) panels are made up of cells of semi-conducting material that release electrons when photons, particles that make up light waves, meet the material
2. Extremely fine metal wires carry electrons to negative and positive circuits to produce current
3. The current flows into the inverter which transforms the direct current (DC) into alternating current (AC)
4. The alternating current is transferred to a substation which boosts its voltage for transmission

Typical Hydroelectric Dam



1. A hydroelectric plant uses falling water from a reservoir through an intake at the bottom of the dam wall to turn the turbine
2. Gravity causes the water to fall through the penstock inside the dam. At the end of the penstock there is a turbine propeller, which is turned by the moving water
3. The shaft from the turbine goes up into the generator, which produces the power
4. The generator is connected to power lines that carry the electricity
5. The water continues past the propeller through the tailrace into the river past the dam