

Solar Panels

Light from the sun consists of particles called photons. As photons are absorbed by the solar panels, the photoelectric effect causes the flow of free electrons producing direct current (DC) electricity.



Inverter

The DC electricity goes to the Inverter, a device that converts the electricity into alternating current (AC) electricity. This form of electricity is what Manzanita Elementary School uses to power our school.



Main Switchbox

The AC electricity then goes to the Main Switchbox where electricity can go to Manzanita Elementary School or out to the PG&E Grid for future use



The Tioga solar field provides low cost electricity directly to Manzanita Elementary School during times when electricity is being produced (like during the day) and when our demands are the highest.



Manzanita Elementary School

PG&E Grid

When the solar field produces more electricity than is being used by Manzanita Elementary School, the excess energy is transferred to the PG&E Grid. This spins our electric meter backwards, resulting in a PG&E credit for Manzanita Elementary School.



When Manzanita Elementary School requires more energy than is being produced by our solar field or when it is not producing energy (like on cloudy days or at night), the PG&E Grid will then supply energy back to Manzanita, ensuring our energy needs are always met. This spins our electric meter forward and PG&E charges MES for that electricity.