



SA SOLAR

SOLAR 101



In an hour and a half, enough sunlight strikes the earth's surface to handle the entire world's energy consumption for one year (energy.gov). By utilizing photovoltaic (PV) solar panels, we can capture a fraction of this energy to power our homes, businesses, and communities. This may raise a question, however – how does solar work and how do we use it?

Solar panels used for utility-scale solar projects, such as the proposed SA Solar Project, are mounted on tilted single-axis tracking systems that follow the sun from east to west, capturing the sun's energy throughout the day. As the sun shines onto a solar panel, the energy from sunlight is absorbed by the PV cells. The energy absorbed by the cells creates electrical charges that move in response to an internal electrical field within the cell – allowing electricity to flow (energy.gov). The energy absorbed by the panel, producing direct current (DC), is then transported through underground cabling to an inverter. The inverter will convert the direct current (DC) to alternating current (AC), which will then be transmitted to a substation to supply nearby power lines with locally sourced renewable energy.

The solar power that is absorbed and produced by the array can power homes, businesses, and communities in the area. This energy flows similarly to water by utilizing the path of least resistance, meaning that if there is energy demand close to the solar array, then power from the array and other available energy resources will flow from the grid to fulfill that need. Once the need for energy at that source is fulfilled, energy will continue to flow down the line to meet additional energy demand. Power can also be directed by Georgia Power to ensure that energy is being appropriately distributed across the grid. Adding power to the electric grid, sourced from a local array, allows our county and state to harness energy from our most abundant resource – the sun.

<https://solartechnologies.com/solar-101-solar-energy-work/>



FOR MORE INFORMATION ON SA SOLAR PROJECT
info@sasolar@project.com | sasolarproject.com