

Grid-Tied Solar Power System

Whitman College Solar Installation in Walla Walla, WA



Whitman College installed a 21kW photovoltaic solar array on the Bratton Tennis Center's rooftop in an effort to reduce the center's energy costs and promote renewable energy in the educational community.

"The amount of energy produced by the photovoltaic panels, which will help offset energy costs, will depend on weather conditions," said Jeff Donahue, construction project manager. "We are projecting a 20 percent reduction in power needed from the power company as a result of the solar panels, and the \$3,150 production incentive we receive from the state will offset 54 percent of the building's power costs annually."

This system was installed as part of Whitman's desire to demonstrate its commitment to environmentally sound projects and to provide a new educational tool to its students.

The 2,500 square foot rooftop installation includes 120 photovoltaic panels, and is the largest solar array in Wall Walla County and in the Washington territories or Pacific Power & Light (PPL) Company. The system will generate an estimated 25,000kWhs annually, which is roughly the amount required to power 3 homes. The resulting CO₂ offset of 33,725lbs is equivalent to preventing the emissions of more than 3 cars.

System Specifications

System Power:	21kW
Total Area:	2500 square feet
PV Array:	(120) 175W modules
Solar Inverter:	(3) 7000W inverters
Data Monitoring Software:	Portable web monitoring, data logging, production monitoring and weather monitoring
Warranty:	1/20/25 module warranty, 10 year inverter warranty, 10 year racking warranty

Yearly Solar Electricity Production



These estimates are based on thirty years of solar radiation data collected near Walla Walla, WA by the USA National Renewable Energy Laboratory. They represent long-term production estimates based on the size of the solar array, solar panel tilt and orientation. Actual production may vary, due to factors including, but not limited to, site-specific shading and solar panel temperature.

