

7.2.2. Energy-efficient renovation and building

Indonesia has a tropical climate so sunlight is abundant throughout the year. Therefore, Indonesia has solar energy potential that we can utilize. Solar energy can also be an alternative energy to overcome the energy crisis that is currently hitting the world. Solar energy can be converted into electricity using solar cell technology.

Solar panels, solar power plants that convert solar energy into electrical energy by absorbing sunlight and storing this energy in the form of batteries which will become a source of electrical energy. This system can still work even at night or in rainy conditions. In other words, it is not affected by climate and weather.

This source of electrical energy is not dependent on fuel, so solar panels are environmentally friendly, because solar energy is an energy source that is available in nature or renewable energy.

The Faculty of Cultural Sciences currently has 5KWp solar panels located in the prayer room, Building X Panel, Cultural Canteen and Lecturer Parking.





SOLAR POWER PLANT

FAKULTAS ILMU PENGETAHUAN BUDAYA

UNIVERSITAS INDONESIA

Langkah nyata FIB UI dalam penghematan energi listrik dan pengurangan emisi karbon.



System Metrics

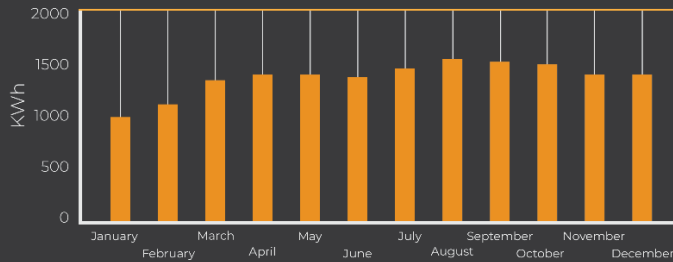
Design	Carport Solar Panel
Module DC Nameplate	12.7 kW
Inverter AC Nameplate	12.0 kW
Annual Production	15.84 MWh
Performance Ratio	77.9%
kWh/kWp	1,243.1
Weather Dataset	TMY, 10km Grid, meteonorm
Simulation Version	26c513b886-2f17bc8804-b418a4e336-5b608c73c1

Shading by Field Segment

Description	Modules	Nameplate	Shaded Irradiance	AC Energy	TOF	Solar Access	Avg TSRF
Carport	28	12,7 kWp	1,595.7 kWh/m ²	15,8 MWh	94.5%	100%	94.5%
Totals, weighted by kWp	28	12,7 kWp	1,595.7 kWh/m ²	15,8 MWh	94.5%	100%	94.5%



Produksi Listrik per Bulan dengan Solar Power Plant



Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Solar Access, Weighted by kWp	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
AC Power (kWh)	984.8	1,074.6	1,312.1	1,386.4	1,383.9	1,351.2	1,447.1	1,524.9	1,490.6	1,410.8	1,234.1	1,237.2